



# ANNUAL REPORT

ON THE

## HEALTH

OF THE

# CITY OF SHEFFIELD

For the year 1949.

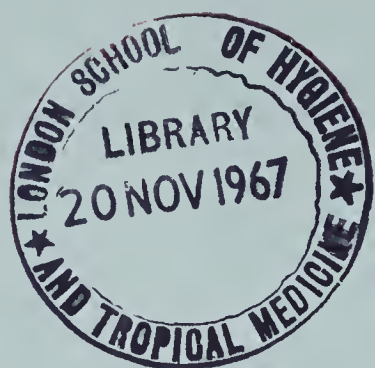
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LLYWELYN ROBERTS, M.D., M.R.C.P., D.P.H.

Medical Officer of Health.

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LLYWELYN ROBERTS, M.D., M.R.C.P., D.P.H.

Medical Officer of Health.

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# City of Sheffield.

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## HEALTH COMMITTEE

as at 31st December, 1949.

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THE LORD MAYOR :  
(ALDERMAN MRS. G. TEBBUTT, J.P.)

*Chairman :*  
ALDERMAN W. E. YORKE, C.B.E., J.P.

*Deputy-Chairman :*  
COUNCILLOR J. S. WORRALL.

Alderman	E. S. GRAHAM, LL.D., J.P.	Councillor	W. MORRISON.
„	L. F. MILNER, O.B.E., J.P.	„	J. PATE.
Councillor	G. ARMITAGE.	„	Mrs. F. ROEBUCK, J.P.
„	G. H. FROGGATT, M.R.C.S., L.R.C.P., L.D.S., etc.	„	E. SCOTT.
„	H. S. GENT.	„	W. SECKER.
„	Mrs. L. E. GRAHAM.	„	J. SHAW.
„	A. E. HOBSON, J.P.	„	Mrs. P. SHEARD, B.A.
„	Mrs. A. IVES, J.P.	„	A. SIDDALL.
„	H. LAMBERT.	„	H. SLACK.
„	J. W. MATE.		

### SUB-COMMITTEES.

#### General Sub-Committee.

*Chairman :* Alderman W. E. YORKE.

Alderman	E. S. GRAHAM.	Councillor	W. MORRISON.
Councillor	G. H. FROGGATT.	„	Mrs. F. ROEBUCK.
„	H. S. GENT.	„	Mrs. P. SHEARD.
„	Mrs. A. IVES.	„	A. SIDDALL.
„	H. LAMBERT.	„	J. S. WORRALL.
„	J. W. MATE.		

#### Maternal, Infant and Nursing Welfare Sub-Committee.

*Chairman :* Councillor Mrs. A. IVES.

Councillor	H. S. GENT.	Councillor	J. SHAW.
„	Mrs. L. E. GRAHAM.	„	Mrs. P. SHEARD.
„	J. W. MATE.	„	A. SIDDALL.
„	W. MORRISON.	„	J. S. WORRALL.
„	Mrs. F. ROEBUCK.		

#### Mental Health Sub-Committee.

*Chairman :* Councillor J. SHAW.

Councillor	G. ARMITAGE.	Councillor	J. W. MATE.
„	H. S. GENT.	„	W. MORRISON.
„	Mrs. A. IVES.	„	A. SIDDALL.
„	H. LAMBERT.		

#### Disabled Persons Welfare Sub-Committee.

*Chairman :* Councillor E. SCOTT.

Alderman	E. S. GRAHAM.	Councillor	J. PATE.
„	L. F. MILNER.	„	Mrs. F. ROEBUCK.
Councillor	G. H. FROGGATT.	„	J. SHAW.
„	Mrs. L. E. GRAHAM.	„	H. SLACK.
„	A. E. HOBSON.	„	J. S. WORRALL.

#### Special, Staffing, etc., Sub-Committee.

*Chairman :* Alderman W. E. YORKE.

Councillor	H. S. GENT.	Councillor	A. SIDDALL.
„	A. E. HOBSON.	„	H. SLACK.
„	Mrs. A. IVES.	„	J. S. WORRALL.

### REPRESENTATIVES ON OTHER COMMITTEES, Etc.

#### Joint Committee—Blind Department and Royal Sheffield Institution.

Councillor	Mrs. F. ROEBUCK.	Councillor	J. S. WORRALL.
„	E. SCOTT.		

#### General Committee of Northern Counties Association for the Blind.

Councillor	E. SCOTT.	Councillor	J. S. WORRALL.
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#### North Eastern Federation of Members of the Queen's Institute of District Nursing.

Alderman	Mrs. G. TEBBUTT (The Lord Mayor).	Councillor	A. E. HOBSON.
Councillor	Mrs. L. E. GRAHAM.		

#### Darnall and District Medical Aid Society.

Councillor	Mrs. A. IVES.	Councillor	Mrs. F. ROEBUCK.
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#### Intake, Gleadless and Hollinsend Nursing Association.

Councillor	J. SHAW.	Councillor	J. S. WORRALL.
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#### Tinsley and District Nursing Association.

Councillor	Mrs. L. E. GRAHAM.	Councillor	A. E. HOBSON.
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# PUBLIC HEALTH STAFF.

AT 1st APRIL, 1950.

## MEDICAL STAFF.

*Medical Officer of Health :*

LLYWELYN ROBERTS, M.D., M.R.C.P., D.P.H.

*Deputy Medical Officer of Health :*

E. L. M. MILLAR, M.D., M.Sc., D.P.H.

### Maternity and Child Welfare—

<i>Senior Assistant M. and C. W. Medical Officer</i>	ANN KIRK BLACK, M.B., Ch.B.
<i>Assistant M. and C. W. Medical Officers -</i>	CATHERINE H. WRIGHT, M.B., Ch.B., D.P.H.
	G. C. A. McDEVITT, L.R.C.P.S.I., D.P.H., D.C.H., L.M.
<i>(Part-time)</i>	J. BLYTH, M.D. (Edin.).
	R. D. DOWNIE, M.B., Ch.B.
	BARBARA S. GORDON, M.B., Ch.B.
	PAMELA LAWS, M.R.C.S., L.R.C.P.
	HAIDRI L. HALL, M.B., Ch.B.
	MARJORIE H. E. FLOWERDAY, M.B., Ch.B.
	JANET E. MacGREGOR, B.Sc., M.B., Ch.B.
	MONICA HELEN ROPER, M.B., Ch.B., D.R.C.O.G.
	ELVIRA TINKER, M.B., Ch.B., D.P.H.
	JOSEPHINE STONER, M.B., Ch.B.
	RAY GRAHAM, B.A., M.B., B.Ch., B.A.O., L.M.
	SHELAGH TYRRELL, M.B., Ch.B.
<i>*Consultant Obstetrician - - - -</i>	W. J. CLANCY, M.B., B.Ch., B.A.O., M.R.C.O.G.
<i>*Orthopædic Specialist - - - -</i>	C. LEE PATTISON, M.B., B.S., M.R.C.S., L.R.C.P.

### Mental Health Service—

<i>*Consultant - - - - -</i>	F. J. S. ESHER, M.B., Ch.B., M.R.C.S., L.R.C.P., D.P.M., F.B.Ps.S.
<i>Consultant (Visiting) - - - -</i>	A. E. NAISH, M.A., M.D. (Camb.), F.R.C.P. (Lond.)

### Prevention of Illness, Care and After-Care—

<i>*Consultant (Tuberculosis) - - - -</i>	H. MIDGLEY TURNER, M.D., M.R.C.P., D.P.H.
<i>*Undertakes part-time duties in this Service in a consultant capacity.</i>	

<i>City Analyst - - - - -</i>	H. CHILDS, B.Sc., F.R.I.C.
<i>Senior Dental Surgeon - - - -</i>	J. WALTER SHAW, H.D.D., L.D.S.R.C.S. (Edin.).

## OTHER STAFF.

### General Administration—

<i>Chief Administrative Assistant - - - - -</i>	W. MORRIS
<i>Senior Administrative Assistant - - - - -</i>	(VACANCY)
<i>Senior Statistical Assistants - - - - -</i>	E. WALSHAW
	L. DARLEY
<i>Senior Staff Officer - - - - -</i>	F. GARFITT
<i>Senior Accountancy Assistant - - - - -</i>	S. F. BURGIN
<i>Correspondence Clerk and M.O.H.'s Secretary - - - - -</i>	Miss H. A. CUTTS

2 Senior and 12 Clerical and other Assistants.

### Sanitary Administration—

<i>Senior Administrative Assistant - - - - -</i>	R. P. HARPHAM
--	---------------

4 Senior and 6 other Clerical Assistants.

### General Sanitary Inspection—

<i>Superintendent Sanitary Inspectors - -</i>	H. LOMAS	W. BERESFORD
	P. MILLWARD	C. F. CHALLENGER
		W. CURTIS
<i>Assistant Superintendent Sanitary Inspectors -</i>	H. B. WARD	F. T. TWELVES
	F. M. COCKCROFT	G. ROBINSON
		J. D. BELL

24 District Sanitary Inspectors.

### Disinfection, Disinfestation, Transport of Stores, etc.—

<i>Superintendent - - - - -</i>	J. SISSONS
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Assistant Superintendent and 25 General Assistants.

### Food Inspection—

<i>Superintendent Food and Drugs Inspector - - - - -</i>	G. A. KNOWLES
<i>Assistant Superintendent Food and Drugs Inspector - - - - -</i>	R. MOORE

3 Food and Drugs Inspectors.



**Meat Inspection—**

*Superintendent Meat Inspector* - - - - - G. WHITELEY  
*Assistant Superintendent Meat Inspector* - - - - - C. F. DEAN

3 Meat Detention Officers, 1 Clerical Assistant and 1 General Assistant (part-time).

**Smoke Inspection—**

*Superintendent Smoke Inspector* - - - - - J. LAW  
*Assistant Superintendent Smoke Inspector* - - - - - H. STENTON

3 Smoke Inspectors.

**Rodent Control—**

*Rodent Officer* - - - - - M. BEEVOR

7 Rodent Operatives.

**Maternity and Child Welfare (Care of Mothers and Young Children)—****Midwifery—****Health Visiting—**

*Chief Administrative Assistant* - - - - - Miss E. A. MARTIN  
*Chief Clerk* - - - - - Miss D. LEIGHTON

1 Senior and 35 other Clerical Assistants ; 18 General Staff.

*Superintendent Health Visitor and Non-Medical Supervisor of Midwives* - Miss M. G. BAKER

*Assistant Superintendent Health Visitor* - - - - - Miss E. LIDDLE

*Senior Health Visitors* - - - - - Miss C. RANDALL Miss D. A. COOLING

34 Health Visitors and 11 Clinic Attendants.

**Domiciliary Midwifery Service—**

48 Midwives directly employed by City Council.

2 Midwives employed under arrangements with the Jessop Hospital for Women.

3 Midwives under arrangements with Voluntary Organisations.

**Nurseries—**

*Supervisory Matron* - - - - - Mrs. G. M. HAWLEY

**Matrons of Nurseries :**

Abbeyfield Park	-	Mrs. D. BIGGINS	Firth Park	-	Mrs. E. A. PETTHRICK
Attercliffe	-	Miss M. W. HIGGINS	Hillsborough	-	(VACANCY)
Beet Street	-	Miss J. M. RILEY	Langsett Road	-	Mrs. E. D. BROWN
Broadfield Road	-	Miss D. BAGULEY	Meersbrook Park	-	Mrs. E. A. FEARN
Carbrook	-	Mrs. A. BARTON	Moore Street	-	Mrs. E. NEWSTEAD
Cradoek Road	-	Mrs. J. ROBERTS	Parson Cross	-	Mrs. V. C. M. JAMES
Crieket Inn Road	-	Miss M. M. STYRING	Prince of Wales Road	-	Mrs. B. BAGSHAW
Darnall	-	Mrs. M. S. SHIELDS	Royal Infirmary	-	Mrs. M. E. OLLERENSHAW
		Swinton Street	-	Mrs. R. M. HERBERT	

137 Staff Nurses, Staff Nursery Nurses, Enrolled Assistant Nurses, Nursery Assistants and Nursery Students. 54 Domestic Staff. 2 Wardens (part-time).

**Domestic Help Service—**

1 Senior and 1 Junior Clerical Assistant. 34 whole-time and 31 part-time Domestic Helps.

**Home Nursing—**

*Senior Clerk* - - - - - F. McWATT

1 Clerical Assistant.

**Johnson Memorial Home (and associated Homes)—**

*Superintendent* - - - - - Miss M. A. REEVES

*Assistant Superintendents* - - - - - Miss M. L. TAYLOR (VACANCY)

17 District Nurses, 17 District Nurses (part-time), 5 Domestic and other Staff, 3 Domestic and other Staff (part-time).

**Princess Mary Home—**

*Superintendent* - - - - - Miss M. H. JACKSON

*Assistant Superintendent* - - - - - Miss M. TATE

3 District Nurses, 1 District Nurse (Male), 10 District Nurses (part-time), 4 Student District Nurses, 2 Domestic and other staff, 2 Domestic and other Staff (part-time).

**Vaccination and Immunisation—**

*Officer in Charge* - - - - - A. MOBLEY

3 Clerical Assistants.

**Ambulance Services—**

*Ambulance Officer* - - - - - E. H. MEDLEY

*Chief Clerk* - - - - - F. C. KELSEY

9 Clerical Assistants, 5 Shift Leaders, 41 Drivers, 20 Attendants, 5 Nurses, 6 Garage Staff, 1 Domestic and other Staff.

**Prevention of Illness, Care and After-Care—**

Part-time of Home Nursing Administrative Staff, 1 Social Worker.

**Mental Health Service—**

*Chief Clerk* - - - - - G. E. B. WHILLOCK

2 Clerical Assistants, 3 Duly Authorised Officers, 5 Assistant Duly Authorised Officers, 1 Mental Health Visitor.

**Occupation Centre—**

*Superintendent* - - - - - V. H. BAKER

1 Charge Nurse, 4 Nursing and 2 Domestic and other Staff.

**Welfare of the Blind Service—**

*Superintendent* - - - - - A. J. BAKER

*Head Clerk* - - - - - Miss E. E. CLARK

9 Clerical Assistants, 6 Home Teachers, 104 Workshops (including Salesshop) Staff (including 85 blind persons), 7 other Staff, 5 other Staff (part-time).

GENERAL STATISTICS

AREA (at 31st December, 1949)	..	..	..	..	..	..	..	..	(acres)	39,598
POPULATION—Census 1931	..	..	..	..	..	..	..	..	..	511,757
Estimate of Registrar General—Civilian population year 1949	..	..	..	..	..	..	..	..	..	513,700
APPROXIMATE NUMBER OF HOUSES (at 31st December, 1949)	..	..	..	..	..	..	..	..	..	151,405
RATEABLE VALUE (1st October, 1949)	..	..	..	..	..	..	..	..	..	£3,331,123
SUM REPRESENTED BY A PENNY RATE (Year 1949-50)	..	..	..	..	..	..	..	..	..	£12,920

EXTRACTS FROM VITAL STATISTICS OF THE YEAR 1949.

				Total.	Males.	Females.				
LIVE BIRTHS—										
Legitimate	..	..	..	7,805	4,083	3,722	} Birth Rate <i>per</i> 1,000 <i>of population</i>			
Illegitimate	..	..	..	282	147	135				
Totals	..	..	..	8,087	4,230	3,857				
STILLBIRTHS	..	..	..	179	103	76	Rate <i>per</i> 1,000 <i>total</i> <i>(live and still) births</i>			22
DEATHS (All Causes)	..	..	..	6,431	3,337	3,094	Death Rate <i>per</i> 1,000 <i>of population</i>			12·5

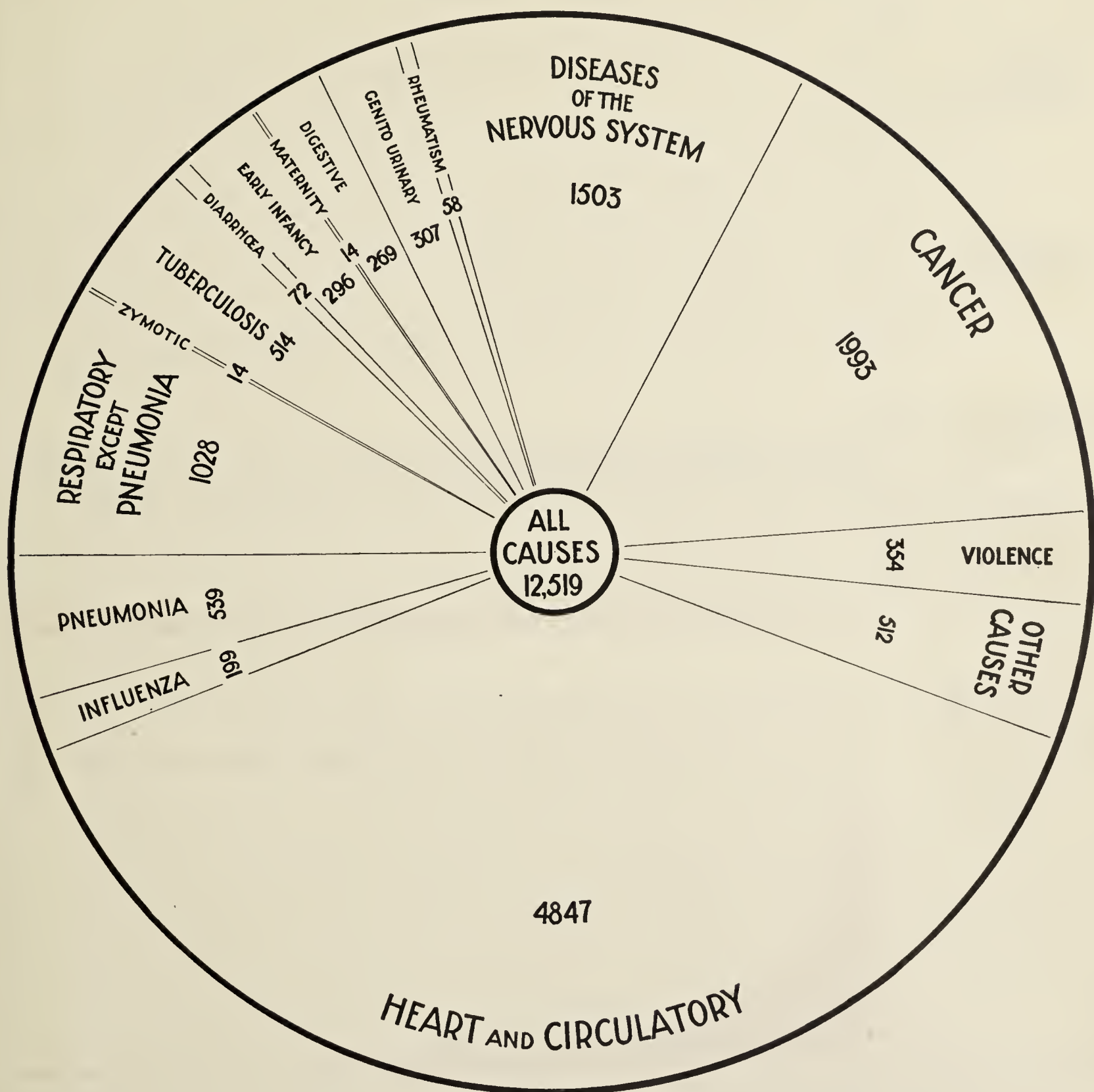
DEATHS OF INFANTS UNDER ONE YEAR OF AGE—

All Infants	..	..	..	..	..	Deaths	..	283	Rate <i>per</i> 1,000 <i>live births</i>		35
Legitimate Infants	..	..	..	..	..	Deaths	..	268	Rate <i>per</i> 1,000 <i>legitimate live births</i>		34
Illegitimate Infants	..	..	..	..	..	Deaths	..	15	Rate <i>per</i> 1,000 <i>illegitimate live births</i>		53

DEATHS FROM CERTAIN CAUSES—

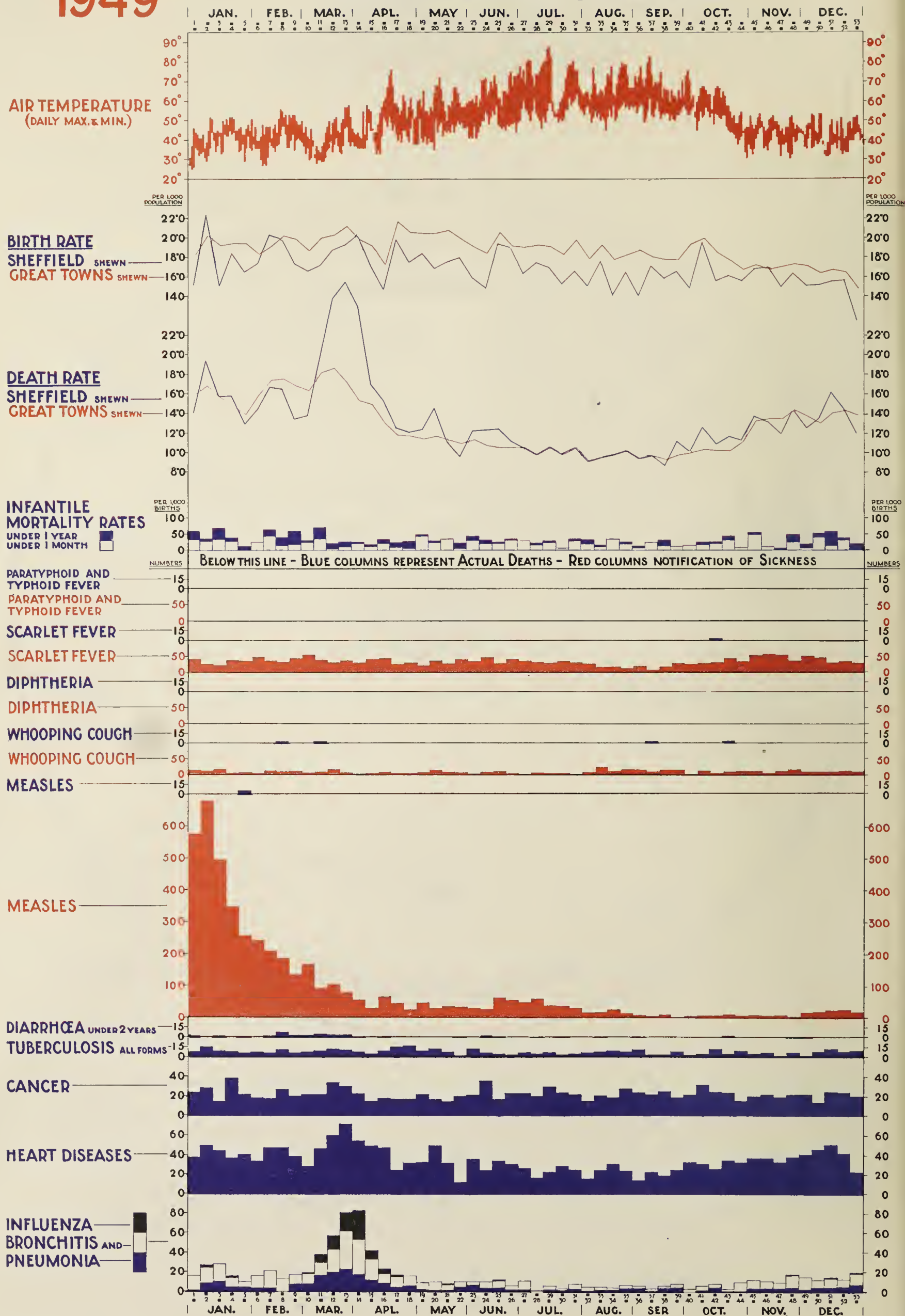
Puerperal Sepsis	..	..	..	..	..	Deaths	..	Nil	} Rate <i>per</i> 1,000 <i>total (live and still) births</i>		
Other Maternal Mortality	..	..	..	..	..	Deaths	..	4			
Total Maternal Mortality	..	..	..	..	..	Deaths	..	4			
Tuberculosis of Respiratory System	..	..	..	..	..	Deaths	..	226	} Rate <i>per</i> 1,000 <i>of population</i>		
Other forms of Tuberculosis	..	..	..	..	..	Deaths	..	38			
Cancer	..	..	..	..	..	Deaths	..	1,024	Rate <i>per</i> 1,000 <i>of population</i>		1·99

CITY OF SHEFFIELD  
 DEATH RATES PER  
 MILLION OF THE POPULATION  
 1949





# CITY OF SHEFFIELD VITAL AND MORTAL STATISTICS



## CITY OF SHEFFIELD

Public Health Department,

Town Hall,

September, 1950.

TO THE CHAIRMAN AND MEMBERS OF THE HEALTH COMMITTEE

Mr. Chairman, Ladies and Gentlemen,

I beg to submit the Annual Report on the Health of the City of Sheffield for the year 1949.

The birth rate of the City, after more or less steadily climbing over a number of years, the 1948 rate being 17·7 per 1,000, fell back in 1949 as it did in the country generally, the Sheffield rate being 15·7 per 1,000 as against an England and Wales rate of 16·7. The general death rate was 12·5 per 1,000, which is noticeably higher than in 1948 when the lowest rate (11·3) was recorded since the year 1930, and this rise is mainly accounted for by the increased deaths in the group of respiratory diseases : Influenza, Pneumonia and Bronchitis ; approximately 200 more people aged 65 and over died from these causes than in 1948. The England and Wales death rate was 11·7 per 1,000.

It is gratifying to be able to state that the 1949 Infant Mortality rate still remains low, although it shows a slight increase on the previous year's figure which was the lowest ever recorded in the City. The 1949 rate was 35 per 1,000 births, as compared with an England and Wales rate of 32 per 1,000. This, when we contemplate the very high infant mortality rate at the beginning of the present century—in 1901, it was actually 202 per 1,000 births—demonstrates how great is the progress which has been made in the preservation of the infant life of the City. Deaths of infants in the first four weeks of life gave a neo-natal mortality rate of 23 per 1,000 births, as against a rate of 17 per 1,000 in 1948.

The 1949 maternal mortality rate was the lowest there has ever been in the City. There were four maternal deaths during the year, giving a rate of 0·48 per 1,000 total (live and still) births. This compares with an England and Wales rate of 0·82 per 1,000.

Sickness incidence and mortality amongst the notifiable diseases remained, with a few exceptions, relatively low in 1949. During the twelve months there were only three notified cases of Diphtheria, none of which proved fatal, this being the first year since 1871, when records were first maintained by the Department, that no deaths from this disease occurred in the City. There were no cases or deaths from Typhoid Fever. There were considerably fewer cases of Whooping Cough and Measles than in the previous year and also decreased death rates, but more Scarlet Fever cases, resulting in one death from this disease—as against no deaths in 1948. There was again an unusually high incidence of Acute Poliomyelitis, the number of cases and deaths being appreciably more than the average of recent years. There was a decrease in the number of Dysentery cases and this has been noted throughout the country. The form of the disease was mild.

The death rate from Enteritis and Diarrhoea (in infants) again receded from that of the previous year, and the 1949 death rate was well below the average of the rates of the five preceding years.

It will be recalled that reference was made in previous Reports to the selection of Sheffield as one of the areas for a trial period of notification of Acute Rheumatism occurring amongst children under sixteen years of age. A separate report has again been prepared, and is included in this Annual Report, upon the investigation which is being made into the social and environmental conditions of the families of the cases notified.

There was an increase in the mortality of the group of respiratory diseases : Influenza, Pneumonia and Bronchitis. The death rate of this group, taken as a whole, was somewhat above the average of the five preceding years.



This is the fourth successive year in which the death rate (0·44) from Tuberculosis of the Respiratory System has decreased, the 1949 death rate being the lowest which has ever been recorded in the City. The death rate from Other Forms of Tuberculosis (0·07) was, however, rather higher than the previous year's record low rate.

The death rate from Cancer, which increased a little in 1948, showed a further slight increase in 1949.

In the service for the Care of Mothers and Young Children—the Maternity and Child Welfare Services—there was again a fall in the number of children who attended the infant clinics in 1949, as compared with the previous year, and once more there were fewer women who attended the ante-natal clinics. Attendances at these clinics had been at a very high level for some years, and some falling off was not unnatural, in view of the falling birth rate.

It will be recalled that a scheme is under contemplation for the provision of a Mother and Baby Home in the City. This proposal is to adapt certain premises in Hucklow Road and, whilst accommodation at this Home will not be extensive, it is hoped shortly to provide facilities for this essential side of the care of mothers (including unmarried women) and their children. The confinements will take place in hospital and it is anticipated that, in the main, the mothers will return to the Home with their babies for a time until they resume work and find other accommodation. The proposal has been submitted for the approval of the Minister of Health.

The Home Nursing Service, as a direct function of the Health Committee, expanded by the inclusion of the services previously undertaken by the Tinsley and District Nursing Association, which, on 28th February, 1949, handed over to the Council the duties in the Tinsley area. Arrangements were initiated for the absorption of the Darnall and District Medical Aid Society's activities in the Home Nursing sphere. At present, the Intake, Gleadless and Hollinsend Nursing Association continues to provide this service in their area, under the general supervision of the Health Committee, the City Council being responsible for the cost. In 1949, the district nurses, including those of the Nursing Associations, made over 183,000 visits and attended almost 5,000 cases.

The records of vaccination for the year 1949 show that there was a decrease of 1,827 in the number of children vaccinated, as compared with the previous year. As regards Diphtheria Immunisation during 1949, 9,230 children under fifteen years of age were immunised, which was rather less than the total of 9,328 in the previous year. It is noteworthy that, although 588 children were immunised in the years 1937 to 1940, since that time and until the end of 1949, a total of 118,310 persons (practically all of them children under 15 years of age) have completed a course of Diphtheria Immunisation. 22,275 children in the age group : five and under fifteen years, received a reinforcing injection during the period : May, 1944 to 31st December, 1949.

The Ambulance Services have continued to meet all the demands made upon them and, during 1949, carried rather more than 98,000 patients, with an aggregate running distance of about 480,000 miles, in other words, an average of 270 patients per day, and an average daily milage of 1,300.

The Care and After-Care Service has again made considerable progress. As regards Tuberculosis care, there is a valuable liaison between the specialist medical officers of the Regional Hospital Board and the staff of the Care and After-Care Service, which ensures that there is an early visit by a health visitor to the home of any person notified as suffering from Tuberculosis, and a report on home conditions is supplied to the specialist medical officer. The service is thus made available to the patient without delay and any special need is at once given attention. Requests for the loan of beds and bedding for the separate use of the patient or of nursing requisites for his treatment are promptly met ; difficulties may be discovered in the home which may be overcome by calling in a district nurse or a domestic help : or the home circumstances may be such as to justify making an effort to find better accommodation for the family. The Care and After-Care Service is being developed, not only as regards Tuberculosis, but as regards other types of illness, and illness generally, with the object of affording all necessary care for patients discharged from hospital and for sick people nursed at home. Arrangements have continued whereby a number of beds is reserved at Convalescent Homes outside the City, to accommodate persons who have been ill but whose active period of treatment is over. A recommendation of the attending medical practitioner is required in every case, and all the circumstances are investigated before a patient is admitted to a Convalescent Home.



Steps were taken to increase the complement of domestic helps in 1949 and, at the end of the year, this staff numbered 59, of whom 32 were employed whole-time and 27 part-time. It is hoped to provide at least 40 full-time and 40 part-time domestic helps if sufficient women can be found for employment in this capacity. There is an increasing demand upon this service, which has proved a boon in providing help in the household when there have been confinements or illness or in cases of old age or infirmity, if help has not been available from any other source. The services of domestic helps were made available during the year in 235 cases of confinements and 422 other cases.

Information will be found in this report regarding the Mental Health Service which is administered by the Health Committee. Broadly speaking, these duties relate on the mental deficiency side to : the ascertainment of mental defectives, the care of defectives in their own homes and the providing of facilities for training and occupation. There were 1,067 mental defectives on the register at the end of the year 1949. The Duly Authorised Officers visit the home of any person who is notified as suffering from mental illness and, as soon as possible, make all necessary arrangements for the proper care of the patient, either for his admission to the mental observation section of Fir Vale Infirmary or to a mental hospital or otherwise. 772 patients were dealt with under these arrangements during 1949.

After acceptance in principle by the local Executive Council, the Health Committee's formal proposals were approved by the Ministry of Health, for establishing the Firth Park Health Centre, by adapting the premises at Sicey Avenue—previously used as a Maternity and Child Welfare Centre and Social Welfare Centre. Provision was made for the accommodation of six general medical practitioners and for the associated services.

Diagrams, following page 66, show the plan of the present Centre and also the suggested adaptations. Although difficulties have arisen, it is to be hoped that this important service can operate in the very near future. A preliminary survey is being made of possible sites for Health Centres to cover the whole of the City area.

A section of this Annual Report is devoted to the services for the welfare of the blind and other handicapped persons ; these services, as co-ordinated under the provisions of the National Assistance Act, 1948, are administered by the Health Committee.

During the year, the staff of sanitary inspectors, amongst their duties, made nearly 60,000 visits to, and inspections of, dwellinghouses under the Public Health Act, 1936, for the investigation and abatement of nuisances. Particulars of these visits and of the general work of the sanitary inspectors, including their work in connection with Housing, appear in this Report. The smoke inspectors continued their observations of the emission of smoke and the records for 1949 show that the average of the minutes of smoke emitted per half hour observation was 2·7 minutes. This compares favourably with the average of 3·1 minutes for the previous year, although an average as low as 1·4 minutes per half hour was recorded in 1938, prior to the war. It will be realised that industry has again been working at full pressure during the year and that difficulties have been experienced in some cases in providing suitable fuel for some processes.

Food inspectors made over 8,000 visits to markets, railways and wholesale food stores during the year, more than 1,300 visits to retail food shops and nearly 700 visits to horseflesh shops, with the object of supervising the preparation of foodstuffs and the conditions under which it is handled and sold.

The daily average consumption of milk in Sheffield during the year was 43,026 gallons, which represents a consumption of 0·67 pints per head of the population. In 1949, the food and drugs inspectors took, for analysis, 1,183 samples of milk and other foods, of which 144, representing 12·17 per cent, proved to be adulterated. This compares with an adulteration rate of 6·75 per cent for 1948, when, because of depletion of staff, only 741 samples were obtained.

There were 122,413 animals slaughtered at the Corporation Abattoir during the year and 4,073 at the two private slaughterhouses in the City. All the animals were examined by the meat inspectors and there were 11,916 animals of which either the whole or part of the carcass or some organ was found to be unfit for food.



The Annual Report provides an opportunity for the Medical Officer of Health to acquaint the Council of the health conditions of the City, to point out deficiencies, to express hopes for improvement and to suggest methods whereby this can be achieved. It can truly be said that the safeguarding of the welfare of the Citizens is the main function of any Council and is primarily the reason why the local authorities came into being. Through the passage of time, the emphasis has to a certain extent changed. New conceptions and obligations have appeared from time to time. The recent Social Legislation is an expression of these new ideals.

Hand in hand with advances of this kind, must go the methods of providing and classifying information, for, without an accurate knowledge of the facts, satisfactory progress cannot be made. Much of the work of the Department consists in collecting, estimating and using the information obtained. The new Classification of Causes of Death and Injury, which has been introduced by the Registrar General for uniform and detailed recording, will, in future, be used in all Public Health Departments. In order to make proper use of the classification, resort to mechanical sorting has been made by the Department, and the statistics relating to ill-health and causes of death will, in the future, be tabulated by such methods. In this way, we hope to obtain more details of sickness and of the associations between ill-health, occupation and environment, and their effect upon the welfare of the population. The local office of the Ministry of National Insurance is providing the Department with the gross figures for ill-health in the various areas of the City. This information is not at the moment of great value, but it is hoped that more detailed information will be forthcoming in the future. The notification of Rheumatism and the subsequent investigations have provided us with useful information, not only of the social conditions encountered in this disease, but also regarding a cross-section of the population. Other well-established sources provide the Department with data regarding the social and environmental conditions; without this knowledge, it would not be possible to take action nor to plan for the future.

The altering conception of Public Health has inevitably altered the basis of Committee function and, at the request of the Chairman, I have had prepared a diagram, which appears opposite this page, showing the duties appertaining to the Health Committee and its various Sub-Committees.

For the proper development of the National Health Service, it is necessary to have full co-operation between the Hospitals, General Practitioners and Public Health Services. While the local authority, as such, has little part to play on the curative side, it is responsible for the Preventive Services—in many ways, the most important duty under the National Health Service Act.

Together with Preventive Medicine, the main function of the Public Health Department is to provide the greatest assistance to a sick person in his own home—to obviate, if possible, the need for a patient to go to hospital and, also, to facilitate the return from hospital, by providing Home Nursing and a Domestic Help Service. Education in health matters in its widest sense and, in particular, for the prevention of ill-health, is becoming an important function of the Health Department. Some indication of the work done is given on page 67. It is the unspectacular day to day service which finally bears fruit.

Whereas, in the past, an important concern of the Public Health Department has been the welfare of mothers and babies and the mentally defective, the Department is now increasingly interested in the aged and in the various types of disabled persons. The service provided for the blind is the prototype. As the services for the different kinds of disabled persons improve, it should be the aim to prevent development in water-tight compartments. A service for all the disabled, whereby persons with one type of disability can assist or become complementary to the sufferers from another, has all to recommend it. The prime needs of all disabled persons are self-expression and independence—undoubtedly best obtained by productive work. The co-operated and co-ordinated efforts of different types of disabled persons would undoubtedly extend the range of the work which could be made available.

In common with most other Public Health Departments, we have given much consideration to the care of the aged, for the development of welfare services for old people is becoming urgent. The reason can be seen from the diagram facing page 28, and the Population Pyramids which



HEALTH COMMITTEE

STATUTORY COMMITTEE

Powers and duties of the City Council in respect of :—

Public Health Acts,  
National Health Service Acts, 1946 and 1949  
National Assistance Act, 1948  
(Section : 29, 30, 47, 50)

Approval of :—

Medical Officer of Health's monthly report on health of City  
Monthly requisitions  
Quarterly report of City Analyst  
Reports of Sub-Committees to which functions are delegated as under :

SUB-COMMITTEES

AUDIT	CLEANSING AND PUBLIC BATHS	DISABLED PERSONS WELFARE	GENERAL	MATERNAL, INFANT AND NURSING WELFARE	MENTAL HEALTH	SPECIAL, STAFFING, ETC.	WEIGHTS AND MEASURES
Verification and checking of monthly expenditure and requisitions of all Sections	Duties under the following Acts :— Public Health Acts, 1875–1936 Sheffield Corporation Acts  Services under these Acts, etc., in relation to :— Refuse Collection Refuse Disposal Public Conveniences Public Baths Public Wash-houses	Duties under the following Acts :— National Assistance Act, 1948  Services under these Acts, etc., in relation to :— Welfare of blind and other handicapped persons Provision of :— Comforts Educational Classes Arrangements for sales of manufactured goods	Duties under the following Acts :— Public Health Acts, 1875–1936 National Health Service Acts, 1946 & 1949 Diseases of Animals Acts Factories Act, 1937 Fertilisers and Feeding Stuffs Act, 1926 Food and Drugs Acts, 1938 and 1944 Housing Acts, 1936–1949 Hydrogen Cyanide (Fumigation) Act, 1937 Merchandise Marks Act, 1926 Milk (Special Designation) Act, 1949 Pharmacy and Medicines Act, 1941 Pharmacy and Poisons Act, 1933 Prevention of Damage by Pests Act, 1949 Sheffield Corporation Acts Shops Act, 1934 Slaughter of Animals Act, 1933 Water Act, 1945	Duties under the following Acts :— National Health Service Acts, 1946 and 1949 Public Health Act, 1936 Midwives Acts, 1902–1936 Nursery and Child Minders Act, 1948 Nurses' Acts.  Services under these Acts, etc., in relation to :— Care of mothers and young children (including Nurseries) Care and After Care (N.H.S. Act, 1946—Sect. 28) Domestic Help Health Visiting Midwifery Supervision of private maternity and nursing homes and nurses' agencies Vaccination and Immunisation	Duties under the following Acts :— National Health Service Acts, 1946 and 1949 Lunacy and Mental Treatment Acts, 1890–1930 Mental Deficiency Acts, 1913–1927  Services under these Acts, etc., in relation to :— Ascertainment of mental ill health. Care and After Care in Mental Health Occupation Centre	Matters of special importance, including senior staff appointments, etc.	Duties under the following Acts :— Weights and Measures Acts, 1878–1936 Sale of Food (Weights and Measures) Act, 1926 Gas Act, 1948 Explosives Acts, 1875 and 1923 Petroleum (Consolidation) Act, 1928 Shops Acts, 1912–1936 Young Persons (Employment) Act, 1938 Celluloid and Cinematograph Film Act, 1922  Services under these Acts, etc., in relation to :— Weights and Measures Explosives Gas meter testing Petroleum Shops Storage of raw and scrap celluloid

ASSESSMENT SECTION

Assessment of applicant's ability to pay for services  
Cancellation of charges already made in certain cases

Services under these Acts, etc., in relation to :—

General Public Health  
General Sanitation  
Ambulance Service  
Caravans, etc.  
Disinfection and Disinfection  
Food and Drugs, etc.  
Food Premises, etc.  
Health and Welfare in Workplaces  
Housing  
Meat and Food Inspection  
Milk and Dairies  
Offensive Trades  
Pleasure Fairs  
Rodent Control  
Sanitary accommodation in factories  
Smoke Nuisances  
Movement of Animals, etc.  
Water Supplies





follow it. The Population Pyramids show the distribution of the population of Sheffield (calculated to a population of 500,000) in age groups at intervals from 1871 to 1947 ; the data has been obtained from the census returns or from information provided by the Registrar General. Two points are obvious : there has been a continuing decrease in the number of children under the age of 15 years, while the number of people over retiring age has been steadily increasing ; Another interesting point, which is commented upon in other parts of this Annual Report, is the fact that females have a better chance of surviving than males.

These findings raise important medico-social problems, nationally and locally. The decreasing numbers of young people are required to support an increasing number of elderly persons. This assistance is not only of a monetary kind, such as pensions and allowances, but there are increasing demands for physical care of the ageing relatives, which, in some cases leads to an aggravation of housing difficulties and may cause disharmony in the home, and a tendency to limit the family. The Local Authority is not primarily interested in old people, as such, but becomes concerned when the aged suffer from the disabilities which are inevitably associated with advancing years. Deafness, loss of sight, mental deterioration, physical weakness and loneliness are all common in old age, and in this way the local authority is made responsible for welfare services for old people in general. We must, however, not think that old people are invariably in need of assistance—indeed the majority of them make important contributions to the general welfare, the conduct of affairs and the national economy. These contributions may come easily as a result of long experience, but there should be arrangements whereby the older worker is provided with a lighter type of work fitted to his capabilities, so that, if he desires, he can continue to contribute to the national well-being, and preserve his well merited self-respect. In particular, it would be a good investment to try to prevent the occurrence of the disabilities associated with old age, and investigations into the methods of doing this are well worth while. Prevention is the best type of welfare.

Nevertheless, the declining years bring their problems, and a welfare service for the aged is a necessity. The service could follow the lines of the established welfare services for mothers and children. Regular visiting of the aged in their own homes, where necessary, should be provided ; periodical examination may bring to light slight departures from the normal which are amenable to early treatment and which, if dealt with at this stage, prevent a more serious breakdown. There should be full co-operation between : the hospital to which the sick old person goes when sick, the Institution where some of them have to live for some periods of their lives, and the home to which most old people are pathetically attached and whose break up is so much dreaded.

It is of great importance not to have a static conception of old age. Becoming old is part of life itself, and old age has its ups and downs. It is not an inexorable and unremitting declension from able-bodied prowess to a doddering state of ineffectual inability. Many of the old people, with proper care and attention, especially attention to their nutritional state, can contribute towards the national well-being and their own support. Even when old persons are confined to their homes or to an Institution they should be encouraged to make this contribution.

The Department has increasingly looked upon the care of the aged in their own homes as a special part of its responsibility in relation to home care. Visiting of the aged is becoming an essential part of the work of the Health Visitor, while the Home Nursing Service and, latterly, the Domestic Help Service have accepted the care of the aged sick and infirm as part of their day to day work. The Housing Department is occasionally able to assist in the housing difficulties brought to its notice. Much may be done in providing small and manageable houses for the aged when they find their own larger houses too much of a burden. The Social Care Department has given all possible assistance when a case needing care has been brought to their notice and, as a result of the joint efforts of the two departments, there has been no need to recourse to court action for the removal of an independent and recalcitrant old person who has ceased to be capable of self-care. But the local authority cannot provide all the care needed for the aged, and it is desirable that all efforts to this end, both voluntary and official, should be co-ordinated.

Mental ill-health is a very important cause of sickness and unhappiness amongst the population. The hospital provision for this is greater than for any other special type of illness but, in view of the fact that patients are seldom admitted to Mental Hospitals except when they



cannot be dealt with outside, it is a fair assumption that there is a large amount of mental ill-health in the general population—preventing full enjoyment of life, and in many cases, causing misery to others. The worry and anxiety associated with many of the present day aspects of life undoubtedly contribute to this state. Very often, mental maladjustment springs from unsatisfactory upbringing, under conditions which the parents themselves may have been powerless to alter, but, in other cases, much can be done to prevent mental ill-health in later life by the proper supervision of the child. The results of the efforts made by all Welfare Departments of the Corporation should, in the long run, profoundly affect and improve the mental health and happiness of the Community, but, in this as in most other aspects of health work, one has to sow in faith and hope that posterity will reap a better harvest. Undoubtedly, we shall have to pay greater attention to the more particular problems of Mental Health, in trying to adjust the mentally sick person to his environment, and to assist the relatives when they encounter mental illness in the home. Most important of all is to take every possible step to prevent its occurrence.

The Health Visitors, despite the fact that this staff is below strength, have increased the scope of their duties. The Home Nursing and the Domestic Help Services have brought the Department into contact with a variety of cases needing help. The extension of the Care and After Care Service now takes health visitors into all the hospitals in the City; provides the almoners with information regarding the home conditions of the patients under treatment; and enables the health visitor to follow the discharged patient back to his home, to see that the advice and instructions given are acted upon, and also to provide the sick person with any necessary nursing or domestic help.

The increasing interest which a local authority takes in the welfare of the citizens is not without some danger. The number and variety of Welfare Workers is constantly multiplying and a home may be under the unco-ordinated supervision of a number of different departments, leading to a possible extravagance of money and personnel. The best way to overcome this difficulty is to have one competent Welfare Worker responsible for a particular area, and able to call to her aid the other specialised Social Workers as and when they are required. There is undoubtedly need for specialist Welfare Workers. These are generally in very short supply, and their time would be much better spent if they could be co-ordinated with the general Welfare Worker of the family, and only called upon to do their own special duties when required. As previously mentioned, in an effort to avoid over-specialisation, Health Visitors undertake the home visiting of the tuberculous patient in their own areas, and make personal contact with the Chest Physician when necessary. The care of the illegitimate child is not now the responsibility of one special Health Visitor, but is being undertaken by each Health Visitor in her area. In the same way, each Health Visitor is investigating one or more problem families in her area. Information is passed on to, and received from, other departments when necessary. The Health Visitor is the social worker for the family—and she should, within her sphere and competence, assist in the prevention of disease, and promote the health of the family by education in health matters. The growing association of the Health Visitor with the family doctor is most desirable for, fundamentally, she should be his assistant.

The work of the Nurseries has continued to expand; they have been fully used and appreciated by the mothers, and there are long waiting lists. In order to co-ordinate the training of the young nursery students and to provide supervision for the Nurseries in general, a Supervisory Matron was appointed in July, 1949. The Local Education Authority and the Local Health Authority have co-operated in providing for nursery students' training, which is given in eight nurseries and in the Nursery Training Centre of the Education Committee. Young applicants for the junior positions in the Nurseries are always asked whether it is their intention to proceed to a Nurse's training, and a number are obviously using the training in the Nursery as a preliminary step to a full nurse's training in the hospitals. Every effort is being made to encourage this. The health of the staff is kept under supervision, and X-ray examinations are carried out to prevent the occurrence of any infection which could harm the children.

Although the number of domiciliary births has fallen, the Midwifery Service has widened the scope of its duties, and the ante-natal care of the mother is becoming increasingly a responsibility of the midwife whose training now includes the supervision of the Mother during the



ante-natal period. In this way the ante-natal care is being undertaken by the person who will be present at the delivery. The use of new drugs, the fuller appreciation of the need to prevent pain in childbirth, and the better care of the premature child are now accepted as the routine duties of the midwifery staff.

There has been a realisation among the public of the importance of clean food and to the dangers that may arise from insanitary handling of foodstuffs, especially now that communal feeding is common. The Department has paid increasing attention to the hygienic storage and preparation of food and to the education of food handlers. All restaurants in the City are being surveyed and the opportunity taken to impress upon the staff and the management the importance of hygienic handling of foodstuffs. The introduction of the new Byelaws relating to food handling is also important. Close attention has been paid to outbreaks of food poisoning. In a number of cases, it has been possible to show a close association between septic conditions in the food handler and the occurrence of food poisoning amongst persons who have eaten the food. In our enquiries, the greatest importance attaches to speed, and we have been greatly helped by the rapid reporting of such cases by Doctors, Hospitals, the Police and members of the general public. I would also like to express my gratitude for the help we have received from the Laboratory Service. The Laboratory in the City General Hospital is now part of the National Public Health Laboratory Service and is able to receive, where necessary, assistance in some of the very detailed investigations involved in cases of food poisoning. The Laboratory has also been of very great assistance to the Department in our investigations into tuberculosis in milk and into the standards of the milk and ice cream and other foods sold in the City.

The following is an account of outbreaks of food poisoning investigated by the Department. They are of interest, and have been the subject of a report, by Dr. Millar and Dr. Pownall, in the *British Medical Journal*.

During the long, hot summer, five small outbreaks of food poisoning in Sheffield produced respectively : 36, 4, 20, 37 and 9 cases of illness. Food preparers with septic hands were proved to be the cause of two outbreaks. In a further two outbreaks, this association was also discovered, but the specimens required for definite proof could not be obtained.

The first outbreak arose on 27th July and affected 36 persons out of a probable total of 500 who had eaten a chicken and rabbit galantine. The food had been prepared by a man who had suffered from mild dermatitis of the hands since infancy and had been employed in the catering industry for 30 years. His unhealthy skin had become infected by *staphylococcus aureus* of a special type which had, in turn, contaminated the galantine as he prepared it. The organisms multiplied and produced their toxin in the food before it was consumed, the weather being exceptionally hot at the time. The number of bacteria per gramme of meat eventually exceeded 20 million, *staphylococci* of the special type predominating. The same organism was also isolated from the vomit and fæces of the victims.

The second outbreak of food poisoning occurred on 23rd August, and arose through the contamination of an ox tongue by a housewife who had cooked and skinned the tongue two days previously. This lady had, on one of her knuckles, a slowly healing, small shallow ulcer which had been caused by a burn. *Staphylococcus aureus* of a special type was isolated in large numbers by swabbing her hands and nostrils, and the ox tongue contained 2,520 million of these organisms per gramme. Four persons became ill through eating the tongue and a fifth escaped. *Staphylococcus aureus* of the same type was also obtained from swabs of the hands of this lady's husband and son.

On another occasion, 20 out of a group of 80 probationer nurses were seized with diarrhœa, colic, vomiting and dizziness, and a further 40 had mild abdominal pain. The only items of food which all the victims had eaten were meat, gravy and peas. Specimens for examination were no longer available by the time notification was received, but it was discovered that the cook who prepared the meat and gravy had burned his hand a few days previously and septic blisters had developed.

Roast chicken was almost certainly the cause of illness in 37 out of another party of 55 diners. The chickens had been prepared by a woman with septic cuts on the hands. After cooking the chickens, she divided them into portions which were kept warm for at least two hours prior to being eaten.



The nine cases of illness were associated with the consumption of a hot meat and potato pie. The illness was almost certainly caused by bacterial toxin.

The introduction of the new Milk Regulations has provided us with an opportunity for taking more thorough action in eradicating tuberculosis among dairy cattle. As will be seen from the Report, we are now able to insist upon the immediate pasteurisation of any raw milk found to contain the tubercle organism; in the meantime, the Veterinary Surgeons examine the herd in order to remove the offending animal.

Unfortunately, as is shown by the figures relating to the condemnation of meat, from the Abattoir, there is a high incidence of tuberculosis amongst cattle. There is reason to hope, however, that the far-sighted policy for improving the milk supply and for eradicating tuberculous cattle will, in time, bear fruit.

The work of the Department has proceeded in other ways. A plan has been accepted by the Health Committee for providing, wherever it is possible, a piped water supply to all areas of the city. At the end of the year, arrangements were being made for providing Ringinglow and the Long Line with a water supply and a drainage system. The water supply of the City in general has been completely satisfactory. The assistance and co-operation of the Water Department have been much appreciated. There have been, from time to time, fruitful consultations between the Departments.

Unfortunately, there are many points where improvements could, and should, be made. Some are matters outside the control of the Local Authority at the present time, but nevertheless, should be mentioned in a health report.

Lack of houses is the cause of a large amount of our social ill-health and must also have repercussions upon physical health. Many of the houses in Sheffield have been recommended for demolition and cannot now be considered as suitable for human habitation. This fact is generally accepted and I am sure it is the earnest desire of the whole Council to proceed as quickly as possible to remove this cause of degradation, unhappiness and ill-health from the City. Much of the work of the Department is concerned with trying to make homes of houses which cannot now be considered as fit for habitation.

The lack of houses has another unfortunate result in that temporary dwellings, some of which are of a most unsatisfactory type, are appearing in many parts of the City. Some of the people who dwell in these places do so because they cannot find a satisfactory dwelling, but prefer to retain their independence. Improvement in the housing situation would decrease the dangers which exist when families, sometimes with young children, live under these unsatisfactory conditions.

Smoke, although in some ways less unsatisfactory than during previous years, still hangs as an unnecessary and poisonous pall upon this City, blighting the pleasures and affecting the health of the citizens. While it is extremely difficult to associate smoke with definite incidence of ill-health, there is evidence that the lack of sunshine is associated with the incidence of some forms of cancer. There are other unsatisfactory results: smoke—a sign of extravagance of our material resources—is an important cause of unhappiness and unnecessary labour to the great majority of the housewives.

Problem families, although not very numerous in relation to the total population, and certainly less common now than they were half a century ago, are a serious challenge to the resources of all the welfare departments of the Authority. They are the flotsam upon the rising tide of social improvement, and a chronic disease which, when established, often permits of no radical cure and, what is more, allows the seeds of degradation to be implanted in the rising generation. It appears to me that the only real way of tackling this problem is by preventing its occurrence. Unfortunately, the origins of this condition and the early process of degeneration may not be obvious, as they arise from many causes. The Department is trying to obtain some significant information on this point, in the hope that some means may be found of discovering when a family is likely to degenerate, and thus permitting preventive action to be taken in good time.

Included in this Annual Report is the result of an investigation carried out by the Department into the causes associated with infant deaths and still-births. This investigation covers the year 1948, following a year when there had been a heavy incidence of infant deaths due to enteritis. The object of the investigation was to find out, if possible, the factors that affect infant mortality, in order to assist in taking preventive action. We were not successful in coming to any definite conclusions on these points. On the other hand, much valuable information has been obtained which will undoubtedly help us in our efforts and in making further investigations. This research was, above all, a joint effort by the whole Department. It has involved inquiries by the Health Visitor and the Sanitary Inspector, together with a large amount of clerical work, and I have had much assistance from the Deputy Medical Officer of Health.

A Public Health Department should, pre-eminently, be of an inquiring mind for this way of approach not only makes it possible to obtain answers to definite problems, but also gives a new interest and a wider conception of preventive work than can possibly be acquired by strict adherence to routine.

One Annual Report gives an inadequate picture of the efforts made to improve and maintain the health of an area ; in it are recorded the realisations of the hopes and endeavours of the Committee and the Department over many years ; it should also be a stimulus to maintain and improve upon the present position.

Finally, I take this opportunity of thanking the staff for their constant loyalty and for their enthusiasm in tackling new problems, despite the shortage of personnel. It also gives me very great pleasure to express to you, and to the Committee, my thanks for all the help and understanding I have received during the year under review.

LLYWELYN ROBERTS,

Medical Officer of Health.





## VITAL STATISTICS

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**Special Features.**—The birth rate of 15·7 per 1,000 for the year 1949 was lower than in the previous year and was slightly less than the England and Wales rate. The general death rate of 12·5 per 1,000 was higher than the 1948 rate and also rather higher than the England and Wales rate.

The Infant Mortality rate of 35 per 1,000 live births represented an increase from the previous year. The 1949 rate for England and Wales was 32 per 1,000 live births. The neonatal mortality rate of the City in 1949 was 23 per 1,000 live births, which was also an increase on the previous year.

The death rate from Tuberculosis of the Respiratory System was 0·440 per 1,000, which was a slight decrease from 1948. The death rate from Other Forms of Tuberculosis was 0·074 per 1,000, as compared with 0·054 per 1,000 in 1948.

The death rate of children under two years of age from Enteritis and Diarrhoea showed a decrease from the 1948 rate, although it was higher than the rate for England and Wales.

125 cases of Acute Poliomyelitis and 5 cases of Polioencephalitis were notified during the year. There were 15 deaths.

There was a substantial decrease in the attack rate from Measles from the previous year and there were only two deaths.

The attack rate from Scarlet Fever increased from the previous year and there was one death from this disease.

The incidence of Diphtheria during 1949 was a new low record and there were no deaths.

There was a substantial decrease in the incidence of Whooping Cough and the death rate was lower than in the previous year.

The incidence rate of Cerebro-spinal Fever decreased from the previous year, and there was also a fall in the death rate.

The maternal mortality rate at 0·48 per 1,000 total (live and still) births was the lowest on record for the City.

Mortality from Cancer again increased slightly and was somewhat above the England and Wales rate.

The death rates from Influenza, Pneumonia and Bronchitis each showed an increase from the rates of the previous year.

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**Area.**—The total area of the City at 31st December, 1949, was 39,598 acres.

**Population.**—The Registrar General's estimate of the civilian population of the City for the year 1949 was 513,700, and this figure is employed in the calculation of the Birth Rates and Death Rates in this Report.

**Marriages.**—The number of marriages in 1949 was 4,478, and the marriage rate (or persons married per 1,000 of the population) was 17·4 as against 18·6 per 1,000 in 1948. The 1949 rate exceeded the England and Wales rate, which was 17·0 per 1,000. It will be seen, too, from the table which follows that the average Sheffield rate for the quinquennium, 1944 to 1948, also exceeded the average rate of England and Wales.

TABLE I.—*Marriages and Marriage Rates in Sheffield and in England and Wales, years 1944 to 1948 and year 1949.*

Year.	Total Number of Marriages in Sheffield.	Persons Married per 1,000 of the population.	
		Sheffield.	England and Wales.
1944	3,858	16·3	14·3
1945	4,953	20·8	18·7
1946	4,829	19·3	18·0
1947	4,761	18·7	18·6
1948	4,781	18·6	18·1
Average (Quinquennium 1944-1948)	4,636	18·7	17·5
1949	4,478	17·4	17·0

**Live Births.**—There were 8,628 live births registered in the City in 1949, and after making allowances for births transferable inwards and outwards the figure of net live births is 8,087. The birth rate was 15·7 per 1,000 of the population as against a rate of 17·7 in 1948. The England and Wales rate for 1949 was 16·7 per 1,000. It will be seen from the statement below that the birth rate of the City was almost continuously on the increase throughout the period from 1939 to 1944. It declined in 1945 and rose again in 1946 and 1947, but declined in 1948 and 1949. The statement also gives the illegitimacy rates of Sheffield and of England and Wales since the year 1939. It will be seen that of the 8,087 live births in 1949 there were 282 illegitimate births and that the illegitimacy rate was 35 per 1,000 live births as against an England and Wales illegitimacy rate of 50 per 1,000. The average of the illegitimacy rates of the City for the ten years 1939 to 1948 is also very considerably below that of England and Wales :—

Year.	Total Live Births.	Birth Rate per 1,000 of Population.	Illegitimate Live Births.	Illegitimacy Rate per 1,000 Live Births.	
				Sheffield.	England and Wales.
1939	8,192	15·7	280	34	42
1940	7,702	15·5	240	31	43
1941	7,477	15·5	263	35	54
1942	7,958	16·6	291	37	56
1943	8,613	18·2	356	41	63
1944	10,072	21·2	453	45	70
1945	8,629	18·1	503	58	92
1946	10,073	20·1	433	43	65
1947	10,522	20·7	399	38	52
1948	9,107	17·7	368	40	53
Average 1939-48	8,835	17·9	359	40	59
1949	8,087	15·7	282	35	50

**Stillbirths.**—Stillbirths allocated to the City in 1949, after making allowance for transferable births, numbered 179 and gave a rate of 0·35 per 1,000 of the population, as against a rate of 0·44 for 1948. The 1949 rate for England and Wales was 0·39. The stillbirths of the City in 1949 also represent a rate of 22 per 1,000 total (live and still) births, as compared with 24 per 1,000 in 1948.

**Deaths.**—There were 6,859 deaths registered in the City in 1949 and the transferable deaths numbered 270 inwards and 698 outwards. Net deaths allocated to the City therefore totalled 6,431 of which 3,337 were males and 3,094 females. The death rate from all causes was 12·5 per 1,000 of the population. This rate, as is shown in the following statement, is higher than the 1948 rate but is lower than the average rate for the decade 1939-1948. It is rather above the 1949 rate for England and Wales of 11·7 per 1,000.



Year		Number of Deaths	Death Rate per 1,000 of the Population
1939	..	6,201	12.0
1940	..	7,538	15.2
1941	..	6,583	13.6
1942	..	5,697	11.9
1943	..	6,215	13.1
1944	..	5,905	12.5
1945	..	5,968	12.5
1946	..	6,167	12.3
1947	..	6,260	12.3
1948	..	5,797	11.3
Average 1939-48	..	6,233	12.7
1949	..	6,431	12.5

**Smallpox.**—There were no cases of Smallpox notified during the year.

**Measles.**—There were 4,023 cases of Measles notified during the year, and the attack rate was 7.83 per 1,000 of the population as against 15.54 per 1,000 in 1948. Admissions to Hospitals, as classified after certain cases had been re-diagnosed in hospital, numbered 136.

There were two deaths, and the death rate was 0.004 per 1,000 of the population. In 1948 there were seven deaths. The average death rate for the five years 1944-1948 was 0.010.

**Scarlet Fever.**—1,759 cases of Scarlet Fever were notified during the year and admissions to Hospitals, as classified after certain cases had been re-diagnosed in hospital, numbered 1,567. The attack rate was 3.42 per 1,000 of the population as against 3.04 for 1948, and an average rate of 2.26 for the quinquennium 1944-1948. There was one death from Scarlet Fever in 1949 and the death rate was 0.002 per 1,000 of the population. In the previous year there were no deaths. The average death rate for the City for the quinquennium 1944-1948 was 0.001.

**Diphtheria.**—Three cases of Diphtheria were notified in 1949 and were admitted to hospital. The attack rate was 0.01 per 1,000 of the population, which has to be compared with a rate of 0.03 for 1948 and an average rate of 0.38 for the quinquennium 1944-1948. There were no deaths from Diphtheria in the year 1949, which compares with a death rate of 0.00 per 1,000 of the population for England and Wales. This was the first year since 1871, when records were first maintained by the Department, that no deaths occurred from this disease in the City. The death rate for the City for 1948 was 0.002 and for the quinquennium 1944-1948 it was 0.012, as against 0.013 for England and Wales.

**Whooping Cough.**—538 notifications of Whooping Cough were received in the year 1949, and the attack rate was 1.05 per 1,000 of the population as against 3.94 in 1948. There were four deaths, giving a death rate of 0.008 per 1,000 of the population. In the year 1948 there were 26 deaths, with a death rate of 0.051 per 1,000. The average death rate for the quinquennium 1944-1948 was 0.026.

**Typhoid and Paratyphoid Fevers.**—There were no cases under the heading of Typhoid and Paratyphoid Fevers notified during the year 1949. In 1948 there were three cases notified in this group, all of Paratyphoid Fever, and there was one death under this general heading. It was of a former Sheffield resident who died from Typhoid Fever in an institution outside the City.

**Enteritis and Diarrhoea under Two Years of Age.**—Mortality from this group of diseases, stated per 1,000 live births, was 3.59 in 1949, as compared with 3.0 for England and Wales. The rate for 1948 was 4.72 as against 3.3 for England and Wales.

**Cerebro-spinal Fever.**—There were nine cases of Cerebro-spinal Fever notified in 1949, as against 12 cases in 1948. The attack rate was 0.02 per 1,000 of the population, which is equivalent to the 1948 rate. The average rate for the five years 1944 to 1948 was 0.05. There were three deaths, as against four deaths in 1948 and the death rate was 0.006 per 1,000 of the population, as against 0.008 in 1948 and an average death rate for the quinquennium 1944 to 1948 of 0.011 per 1,000.

**Acute Poliomyelitis and Polioencephalitis.**—130 cases were notified during the year—125 of Poliomyelitis and five of Polioencephalitis—compared with 22 cases notified in 1948, all of Poliomyelitis. The attack rate was 0.26 per 1,000 of the population, comparing with a rate of 0.04 for 1948. During the year there were 15 deaths from this disease, as against one in 1948, but a further three cases which had been notified in 1949 died in 1950.

In August, 1950, an investigation showed that the condition of 127 of the cases notified in 1949 was as follows :—

No residual paralysis	..	..	..	..	..	36
Minor residual paralysis	..	..	..	..	..	41
Moderate residual paralysis	..	..	..	..	..	16
Severe residual paralysis	..	..	..	..	..	16
Deaths (1949) ..	..	..	..	..	..	15
Deaths (1950) ..	..	..	..	..	..	3

**Encephalitis Lethargica.**—No cases of Encephalitis Lethargica were notified during the year. There were ten deaths under this heading, all of them from sequelæ of this disease. No cases were notified in 1948, and there were seven deaths under the heading.

**Dysentery.**—43 cases of Dysentery, the majority of them being of the Sonne type, were notified during the year. There was one death. In 1948 there were 365 cases and one death.

**Malaria.**—No cases of Malaria were notified during the year. In 1948 there were five cases notified, all of which were contracted abroad.

**Food Poisoning.**—There were 110 cases of Food Poisoning recorded during 1949. In 1948 there were no notifications. There was no death in either year.

**Influenza.**—The Influenza death rate was 0·199 per 1,000 as against 0·15 for England and Wales, the corresponding 1948 figures being 0·012 and 0·03 respectively. The average City rate for the five years 1944-1948 was 0·064 per 1,000.

**Pneumonia.**—The Pneumonia incidence rate was 3·32 per 1,000 of the population, as against 2·69 per 1,000 in 1948. 1,704 cases were notified in 1949, and there were 642 treated in the City General Hospital and 271 in the City Fever Hospital, an aggregate of 913 which represents 54 per cent. of the cases. A total of 277 persons died from Pneumonia during the year—156 males and 121 females—and the death rate was 0·539 per 1,000 of the population. There were 220 deaths from Pneumonia in the year 1948, and the death rate was 0·428 per 1,000. The average death rate for the five years 1944 to 1948 was 0·549 per 1,000.

**Bronchitis.**—There were 440 deaths from Bronchitis during the year as compared with 327 deaths in 1948. The death rate was 0·856 per 1,000 of the population, which compares with a rate of 0·638 for the year 1948. The average City rate for the five years 1944-1948 was 0·812 per 1,000.

**Acute Rheumatism.**—Under the Acute Rheumatism Regulations, 1947, Sheffield was selected for a trial period of notification of Acute Rheumatism in children under 16 years of age, commencing on 1st October, 1947. In the three months to the end of 1947 there were 71 cases notified. In the year 1948, 116 cases were classified as properly notifiable under the Regulations, the corresponding figure for 1949 being 44 cases. This is discussed in a separate report, which appears at the end of this section of the Annual Report, upon an investigation which has been made into these cases.

**Cancer.**—A total of 1,024 persons, 538 males and 486 females, died from Cancer in the year 1949. The death rate was 1·993 per 1,000 of the population, as against 1·986 in 1948.

Below is a table which gives details of deaths of Sheffield residents from Cancer in the period 1944 to 1949 and a comparison of the Sheffield death rate with that of England and Wales.

The numbers of deaths under the detailed sub-headings of Cancer, classified according to sex and in age periods are given in table VIII on page 25.

**TABLE II.**—*Cancer Mortality of Sheffield and of England and Wales for the year 1949 and the previous five years.*

Year	Deaths of Sheffield Residents			Death Rate per 1,000 of the Population	
	Males	Females	Total	Sheffield	England and Wales
1944	466	420	886	1·87	1·90
1945	466	406	872	1·83	1·93
1946	499	436	935	1·87	1·84
1947	553	427	980	1·93	1·85
1948	562	460	1022	1·99	1·86
5 yrs' av'ge (1944-48)	509	430	939	1·90	1·88
1949	538	486	1024	1·99	1·87



**Tuberculosis.**—There were 693 notifications of Tuberculosis of the Respiratory System in 1949, and the incidence rate was 1·35 per 1,000 of the population as against 1·13 per 1,000 in 1948. There were 84 notifications of Other Forms of Tuberculosis, giving an incidence rate of 0·16 per 1,000 which corresponds with a rate of 0·24 per 1,000 for 1948.

Deaths from Tuberculosis of the Respiratory System numbered 226 of whom 151 were males and 75 females. The death rate per 1,000 of the population was 0·440. This figure compares with a rate of 0·441 in 1948, an average rate of 0·512 for the five years 1944 to 1948, and an England and Wales rate for 1949 of 0·403 per 1,000.

There were 38 deaths from Other Forms of Tuberculosis, 19 of males and 19 of females. The death rate was 0·074 per 1,000 of the population, as against a rate for 1948 of 0·054 per 1,000, an average rate of 0·084 for the five years 1944 to 1948, and an England and Wales rate of 0·054 for the year 1949.

Death rates from Tuberculous Diseases per million of the population for Sheffield and England and Wales in the ten years, 1940 to 1949, are given in the table below :—

**TABLE III.**—*Death Rates per Million from Tuberculosis, ten years, 1940 to 1949.*

Year			Respiratory System		Other Forms		All Forms	
			Sheffield	England and Wales	Sheffield	England and Wales	Sheffield	England and Wales
1940	...	...	737	588	105	111	842	699
1941	...	...	608	602	110	128	718	730
1942	...	...	622	542	106	115	728	657
1943	...	...	639	557	114	111	753	668
1944	...	...	523	524	112	104	635	628
1945	...	...	561	515	107	100	668	615
1946	...	...	536	468	66	83	602	551
1947	...	...	500	470	79	79	579	549
1948	...	...	441	440	54	67	495	507
1949	...	...	440	403	74	54	514	457

**Infant Mortality.**—There were 283 deaths of Infants under one year of age in 1949 as compared with 294 in 1948. The infant mortality rate of 32 per 1,000 live births in 1948, which was a low record for the City, rose to 35 per 1,000 in 1949. The England and Wales rate for 1949 was 32 per 1,000.

In the table which follows are given the infant mortality rates for Sheffield and for England and Wales during the past 20 years. It will be seen that since the year 1933 the Sheffield rate has been almost consistently lower than the England and Wales rate.

**TABLE IV.**—*Infant Mortality, Sheffield and England and Wales, 20 years, 1930 to 1949.*

Year	Infant Mortality		Year	Infant Mortality	
	Sheffield	England and Wales		Sheffield	England and Wales
1930	67	60	1940	55	56
1931	69	66	1941	67	60
1932	73	65	1942	49	51
1933	63	64	1943	56	49
1934	55	59	1944	41	45
1935	52	57	1945	46	46
1936	59	59	1946	36	43
1937	55	58	1947	42	41
1938	50	53	1948	32	34
1939	48	50	1949	35	32

In the table which follows in regard to infant mortality particulars are given of the deaths of infants in the year 1949, classified according to causes of death and the various age groups under one year of age. Premature birth continued to be responsible for the largest number of deaths of infants, increasing from 62 deaths in 1948 to 93 in 1949.



TABLE V.—*Infant Mortality ; Deaths in the year 1949 from stated causes at various ages under One Year.*

CAUSES OF DEATH	Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 4 weeks	4 weeks and under 3 months	3 months and under 6 months	6 months and under 9 months	9 months and under 12 months	Total deaths under 1 year
Smallpox .. .. .	..	..	..	..	..	..	..	..	..	..
Chicken Pox .. .. .	..	..	..	..	..	..	..	..	..	..
Measles .. .. .	..	..	..	..	..	..	..	..	..	..
Scarlet Fever.. .. .	..	..	..	..	..	..	..	..	..	..
Whooping Cough .. .. .	..	..	..	..	..	1	..	1	..	2
Diphtheria .. .. .	..	..	..	..	..	..	..	..	..	..
Influenza .. .. .	..	..	..	..	..	1	1	1	..	3
Tuberculosis of Respiratory System	..	..	..	..	..	..	..	..	..	..
Tuberculosis of Nervous System ..	..	..	..	..	..	..	..	..	..	..
Tuberculosis of Intestines and Peritoneum .. .. .	..	..	..	..	..	..	..	..	..	..
Other Tuberculous Diseases .. .. .	..	..	..	..	..	..	..	..	1	1
Syphilis .. .. .	..	..	..	..	..	..	..	..	..	..
Meningitis (not Tuberculous) .. .. .	..	1	..	..	1	..	..	3	2	6
Convulsions .. .. .	..	..	..	..	..	1	..	..	..	1
Bronchitis .. .. .	..	..	..	..	..	..	2	..	..	2
Pneumonia .. .. .	..	2	2	..	4	12	8	9	3	36
Inflammation of Stomach .. .. .	..	..	..	..	..	..	..	..	..	..
Diarrhoea and Enteritis .. .. .	..	..	1	1	2	9	8	6	2	27
Rickets .. .. .	..	..	..	..	..	..	..	..	..	..
Hernia, Intestinal Obstruction .. .. .	..	..	..	..	..	..	..	..	..	..
Congenital Malformations .. .. .	12	4	1	2	19	6	3	3	1	32
Congenital Debility .. .. .	..	..	..	..	..	1	1	..	..	2
Icterus .. .. .	3	..	..	..	3	..	..	..	..	3
Premature Birth .. .. .	83	7	1	2	93	..	..	..	..	93
Injury at Birth .. .. .	26	3	1	..	30	..	..	..	..	30
Diseases of Umbilicus .. .. .	..	..	..	..	..	..	..	..	..	..
Atelectasis .. .. .	14	..	..	..	14	..	..	..	..	14
Suffocation, Overlying .. .. .	..	..	..	1	1	2	6	..	1	10
Other Causes .. .. .	13	1	..	1	15	3	..	..	3	21
All Causes .. .. .	151	18	6	7	182	36	29	23	13	283

**Neo-Natal Mortality.**—Deaths of infants occurring within the first four weeks of life numbered 182 in the year 1949, giving a neo-natal mortality rate of 23 per 1,000 live births. The rate for the year 1948 was 17 per 1,000. The neo-natal deaths in 1949 comprise 64 per cent. of the total deaths of children under one year of age as against 52 per cent. in 1948.

**Pregnancy, Child Birth and the Puerperal State.**—There were 107 cases of Puerperal Pyrexia notified during the year 1949 and the incidence rate, calculated per 1,000 total (live and still) births, was 12·94 as against a rate of 9·64 in 1948.

There were four maternal deaths during the year 1949, as compared with six in 1948. There were no deaths from Puerperal Sepsis, whereas in 1948 there was a death rate of 0·11 per 1,000 total (live and still) births and for the five years 1944 to 1948 an average rate of 0·20. The 1949 England and Wales death rate for Puerperal Sepsis was 0·11. The total maternal mortality rate of the City, which was 0·64 per 1,000 total (live and still) births in 1948 fell to 0·48 per 1,000 in 1949, in which year the corresponding England and Wales rate was 0·82 per 1,000. The average Sheffield rate for the period 1944 to 1948 was 0·95, as against an England and Wales average of 1·22. The table which follows gives, for recent years, the total maternal deaths in Sheffield, the Puerperal Pyrexia incidence rates of the City, the death rates of the City from Puerperal Sepsis and from other maternal causes and also comparative figures of the total maternal mortality rates of Sheffield and of England and Wales. Deaths from abortion are disregarded in stating maternal mortality rates.

TABLE VI.—*Total Maternal Deaths in Sheffield ; Sickness from Puerperal Pyrexia ; also Maternal Mortality per 1,000 total (live and still) Births, years 1944-1949.*

Year.				Total Maternal Deaths in Sheffield (excluding Abortion)	Rates per 1,000 total (live and still) Births.				
					Sickness incidence from Puerperal Pyrexia	Maternal Mortality.			
						Puerperal Sepsis	All Other Causes	Total Maternal Mortality	
								Sheffield	England and Wales
1944	..	..	..	9	18·34	0·19	0·68	0·87	1·52
1945	..	..	..	12	20·16	0·34	1·01	1·35	1·47
1946	..	..	..	6	14·27	0·19	0·39	0·58	1·24
1947	..	..	..	14	13·59	0·18	1·11	1·29	1·01
1948	..	..	..	6	9·64	0·11	0·53	0·64	0·86
Average 5 years 1944-1948				9	15·20	0·20	0·74	0·95	1·22
1949	..	..	..	4	12·94	—	0·48	0·48	0·82

**Notification of Infectious Disease.**—The table which follows shows the number of cases which occurred of each of the infectious and other notifiable diseases during the year 1949. Notifications of each disease are tabulated in specified age groups.

TABLE VII.—*Cases of Infectious and other notifiable Diseases during the year 1949 classified under age periods ; also Admissions to Hospital.*

NOTIFIABLE DISEASE	Number of Cases Notified									Admis- sions to Hospital
	At Specified Age Periods									
	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 35	35 and under 45	45 and under 65	65 and upwards	At all Ages	
Smallpox .. .. .	..	..	..	..	..	..	..	..	..	..
Measles .. .. .	260	2,840	898	11	8	4	1	1	4,023	136
Whooping Cough .. .. .	59	347	129	1	..	2	..	..	538	34
Scarlet Fever .. .. .	8	654	1,037	30	19	7	4	..	1,759	1,567
Diphtheria .. .. .	..	..	1	1	1	..	..	..	3	3
Typhoid Fever .. .. .	..	..	..	..	..	..	..	..	..	..
Paratyphoid Fever .. .. .	..	..	..	..	..	..	..	..	..	..
Puerperal Pyrexia .. .. .	..	..	1	44	41	21	..	..	107	*100
Erysipelas .. .. .	..	4	5	1	14	26	83	46	179	77
Cerebro-spinal Fever .. .. .	3	5	1	..	..	..	..	..	9	9
Acute Poliomyelitis .. .. .	2	40	50	18	12	1	1	1	125	120
Polioencephalitis .. .. .	..	1	4	..	..	..	..	..	5	4
Ophthalmia Neonatorum .. .. .	9	..	..	..	..	..	..	..	9	†2
Pneumonia .. .. .	132	345	184	70	89	152	406	326	1,704	913
Malaria .. .. .	..	..	..	..	..	..	..	..	..	..
Dysentery .. .. .	1	18	9	1	5	3	5	1	43	23
Encephalitis Lethargica .. .. .	..	..	..	..	..	..	..	..	..	..
Food Poisoning .. .. .	..	1	2	20	25	37	18	7	110	..
Tuberculosis of Respiratory System .. .. .	4	61	123	150	119	87	121	28	693	1,323
Other Forms of Tuberculosis .. .. .	2	18	41	8	3	5	6	1	84	
Acute Rheumatism .. .. .	..	1	43	..	..	..	..	..	44	
Totals .. .. .	480	4,335	2,528	355	336	345	645	411	9,435	4,311

\* Includes cases where the confinement took place in hospital.      † Includes one case where the child was born in hospital.



**Causes of Death.**—In Table VIII on page 25 are given particulars of the number of deaths of Sheffield residents in the year 1949 classified according to disease, sex and age periods. It should be stated that commencing with deaths registered in the year 1940 the classification of causes of death is that prescribed in the International List (fifth revision 1938), which replaces the fourth revision of 1929. This change in classification has lessened the value, as regards certain causes of death, of the comparisons which are made of death rates prior to the year 1940 with those of subsequent years.

**Registration Sub-Districts and Municipal Wards.**—Under the Births and Deaths Registration Scheme of the Sheffield City Council, which came into operation on 1st April, 1935, the City is divided into six Registration Sub-Districts each comprising two, three or five Municipal Wards as follows :—Sheffield North (Neepsend and Firth Park Wards); Sheffield Central (St. Peter's, Sharrow and Broomhill Wards); Sheffield South-West (Woodseats, Nether Edge, Hallam, Ecclesall and Norton Wards); Sheffield North-East (Brightside, Burngreave, Attercliffe, Tinsley and Darnall Wards); Sheffield North-West (Hillsborough, Owlerton, Walkley, Crookesmoor and St. Philip's Wards); and Sheffield East (Park, Manor, Heeley, Handsworth and Moor Wards). The vital statistics of these Municipal Wards for the year 1949 appear in Table IX on pages 26 and 27.

**Population and Birth Rates and Death Rates in Past Years.**—Table X on page 28 gives information in regard to the population of the City in 1949 and past years; also the numbers of births and deaths in the City and the birth rates and death rates of Sheffield and of England and Wales in those years.



TABLE VIII.—Deaths of Sheffield Residents in the Year 1949 Classified according to Disease, Sex and Age-Periods.

CAUSE OF DEATH	Sex	All Ages	0—	1—	2—	5—	15—	25—	35—	45—	55—	65—	75—
ALL CAUSES ...	M	3337	167	21	14	29	28	76	156	299	652	1046	849
	F	3094	116	14	18	18	35	70	116	217	390	844	1256
TOTALS ...		6431	283	35	32	47	63	146	272	516	1042	1890	2105
1. a. Typhoid Fever ...	M	—	—	—	—	—	—	—	—	—	—	—	—
	F	—	—	—	—	—	—	—	—	—	—	—	—
b. Paratyphoid Fever	M	—	—	—	—	—	—	—	—	—	—	—	—
	F	—	—	—	—	—	—	—	—	—	—	—	—
2. Cerebro-Spinal Fever	M	3	1	1	—	1	—	—	—	—	—	—	—
	F	—	—	—	—	—	—	—	—	—	—	—	—
3. Scarlet Fever ...	M	1	—	—	—	1	—	—	—	—	—	—	—
	F	—	—	—	—	—	—	—	—	—	—	—	—
4. Whooping Cough ...	M	1	—	1	—	—	—	—	—	—	—	—	—
	F	3	2	1	—	—	—	—	—	—	—	—	—
5. Diphtheria ...	M	—	—	—	—	—	—	—	—	—	—	—	—
	F	—	—	—	—	—	—	—	—	—	—	—	—
6. Tuberculosis of Respiratory System	M	151	—	—	—	1	3	28	30	38	31	19	1
	F	75	—	—	—	1	14	28	12	11	4	5	—
7. Other forms of Tuberculosis	M	19	1	4	2	2	3	1	4	—	2	—	—
	F	19	—	3	1	3	2	1	3	4	2	—	—
8. Syphilitic Diseases...	M	15	—	—	—	—	—	—	—	1	11	1	2
	F	8	—	—	—	—	—	—	—	3	1	2	2
9. Influenza ...	M	45	3	1	—	—	—	—	3	4	13	17	4
	F	57	—	1	—	—	2	2	—	3	9	15	25
10. Measles ...	M	1	—	—	1	—	—	—	—	—	—	—	—
	F	1	—	—	1	—	—	—	—	—	—	—	—
11. Acute Poliomyelitis & Polioencephelitis	M	8	—	1	2	4	—	1	—	—	—	—	—
	F	7	—	—	—	4	1	2	—	—	—	—	—
12. Acute Infectious Encephalitis	M	6	—	—	—	—	—	1	1	2	1	—	1
	F	4	—	—	—	—	—	—	3	—	1	—	—
13. Cancer of Buccal cavity & œsophagus (M) Uterus (F)	M	36	—	—	—	—	—	1	1	1	6	18	9
	F	56	—	—	—	—	—	2	4	14	18	12	6
14. Cancer of Stomach and Duodenum	M	90	—	—	—	—	—	1	7	12	32	24	14
	F	78	—	—	—	—	—	3	5	4	10	33	23
15. Cancer of Breast ...	M	—	—	—	—	—	—	—	—	—	—	—	—
	F	88	—	—	—	—	1	—	9	18	20	21	19
16. Cancer of all other sites	M	412	—	—	—	2	1	7	20	53	112	151	66
	F	264	—	1	4	—	1	4	14	50	49	83	58
17. Diabetes ...	M	4	—	—	—	—	—	—	—	1	—	3	—
	F	20	—	—	—	—	—	—	—	2	3	7	8
18. Intra-cranial vascular lesions (cerebral hæmorrhage, etc.)	M	289	—	—	—	—	1	2	4	10	53	122	97
	F	403	—	—	—	—	2	5	9	18	63	117	189
19. Heart Diseases ...	M	926	—	—	—	—	2	5	23	71	187	330	308
	F	926	1	—	1	—	4	4	19	41	91	293	472
20. Other Diseases of Circulatory System	M	294	—	—	—	—	—	1	3	10	29	87	164
	F	344	—	—	—	—	—	—	4	6	18	79	237
21. Bronchitis ...	M	289	—	1	—	1	2	—	12	29	64	101	79
	F	151	2	—	1	2	1	1	2	4	23	45	70
22. Pneumonia ...	M	156	19	6	—	1	1	1	6	11	31	60	20
	F	121	17	2	3	1	1	3	2	6	15	38	33
23. Other Respiratory Diseases	M	47	1	—	—	—	—	1	3	12	12	15	3
	F	41	—	—	—	—	—	—	2	3	12	13	11
24. Ulcer of Stomach or Duodenum	M	30	—	—	—	—	—	2	8	5	4	8	3
	F	16	1	—	—	—	—	—	—	3	1	6	5
25. Enteritis and Diarrhoea	M	18	15	1	—	—	—	1	—	1	—	—	—
	F	15	12	1	—	—	—	—	—	—	1	—	1
26. Appendicitis ...	M	4	—	—	1	—	1	—	—	1	—	1	—
	F	7	—	—	—	2	1	—	2	—	1	1	—
27. Other Digestive Diseases...	M	36	—	—	—	1	—	2	6	2	7	9	9
	F	49	—	—	1	—	2	4	2	3	7	19	11
28. Nephritis ...	M	52	1	—	—	—	2	1	6	6	11	19	6
	F	39	—	—	—	2	1	2	2	3	7	10	12
29.*Puerperal and post-abortive infections	M	—	—	—	—	—	—	—	—	—	—	—	—
	F	2	—	—	—	—	—	2	—	—	—	—	—
30.*Other Maternal Causes	M	—	—	—	—	—	—	—	—	—	—	—	—
	F	5	—	—	—	—	—	3	2	—	—	—	—
31. Premature Birth ...	M	56	56	—	—	—	—	—	—	—	—	—	—
	F	37	37	—	—	—	—	—	—	—	—	—	—
32. Congenital malformations, birth injuries, infantile diseases	M	63	57	1	—	1	1	1	—	1	1	—	—
	F	45	34	—	2	—	—	—	3	3	3	—	—
33. Suicide ...	M	18	—	—	—	—	1	2	1	3	6	4	1
	F	12	—	—	—	—	—	2	1	3	2	4	—
34. Road Traffic Accidents	M	33	—	2	2	5	4	4	3	—	4	6	3
	F	9	—	1	1	2	—	—	1	—	—	4	—
35. Other Violent Causes	M	53	5	—	—	5	3	5	5	7	6	8	9
	F	57	5	1	1	—	1	—	3	2	2	9	33
36. All other Causes ...	M	181	8	2	6	4	3	8	10	18	29	43	50
	F	135	5	3	2	1	1	2	12	13	27	28	41

\* Item 29 includes two deaths from abortion and item 30 one death from abortion. Such deaths are disregarded in producing the Maternal Mortality Ratio.

TABLE IX.—Registration Sub-Districts and Municipal Wards ; Estimated Population ; Acreage, Rates per 1,000 of the Population ; also

REGISTRATION SUB-DISTRICTS	NORTH		CENTRAL			SOUTH-WEST					NORTH-EAST			
MUNICIPAL WARDS	Neep- send	Firth Park	Saint Peter's	Shar- row	Broom- hill	Wood- seats	Nether Edge	Hallam	Eccles- all	Norton	Bright- side	Burn- greave	Atter- cliffe	
ESTIMATED POPULATION	39,766	43,359	5,948	17,977	21,485	20,756	15,527	21,514	23,399	17,693	21,121	16,340	15,876	
ACREAGE ... ..	1,810	1,534	260	283	981	1,668	529	9,089	2,779	5,433	1,569	396	379	
PERSONS PER ACRE ...	22	28	23	64	22	12	29	2	8	3	13	41	42	
Smallpox ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	
Measles ... ..	0·025	...	...	...	...	...	...	...	...	...	...	...	0·063	
Scarlet Fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diphtheria ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	
Whooping Cough...	0·025	...	...	...	...	0·048	...	...	...	...	...	...	...	
Typhoid Fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	
Paratyphoid Fever ...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Influenza ... ..	0·176	0·138	...	0·111	0·279	0·289	0·258	0·232	0·128	0·113	0·284	0·184	0·252	
Enteritis and Diarrhœa ...	0·101	0·023	0·168	0·056	0·047	0·096	0·064	...	0·085	...	0·095	0·061	...	
Pneumonia ... ..	0·629	0·392	1·009	0·723	0·419	0·385	0·258	0·651	0·385	0·056	0·852	0·306	1·008	
Cancer ... ..	1·811	1·476	2·354	2·447	2·234	2·891	2·318	1·953	2·351	1·922	1·562	1·898	1·323	
Tuberculosis of Respira- tory System ... ..	0·604	0·415	0·504	0·223	0·186	0·385	0·451	0·279	0·299	0·170	0·568	0·428	0·567	
Tuberculosis— Other Forms ... ..	0·151	0·069	...	0·111	0·093	0·145	0·129	...	0·043	...	0·189	0·061	0·063	
Rheumatism, &c. ... ..	0·025	0·023	0·336	...	0·047	...	0·193	0·139	0·085	0·056	...	...	0·063	
Diseases of {	Nervous System and Sense Organs ... ..	1·358	1·453	1·345	1·224	1·583	1·783	1·996	1·859	1·453	1·074	1·420	1·040	2·330
	Circulatory System ...	4·149	4·106	7·398	5·618	5·911	5·829	5·668	6·276	5·769	3·956	4·214	5·203	5·102
	Respiratory System except Pneumonia ...	1·056	0·808	1·681	1·113	0·745	0·964	1·095	1·394	0·898	0·339	1·184	0·979	1·008
	Digestive System ox- cept Enteritis and Diarrhœa ... ..	0·201	0·138	0·336	0·223	0·372	0·289	0·193	0·325	0·342	0·283	0·331	0·184	0·378
	Genito Urinary System except Venereal Disease ...	0·277	0·323	0·336	0·389	0·372	0·434	0·451	0·418	0·299	0·283	0·237	0·306	0·504
Early Infaney ... ..	0·503	0·208	...	0·278	0·186	0·193	0·386	0·047	0·214	0·113	0·568	0·306	0·440	
Suicide ... ..	0·025	0·069	0·336	0·167	...	0·096	0·193	...	...	0·170	0·095	0·122	...	
Violence—except Suicide	0·151	0·346	0·336	0·389	0·279	0·289	0·580	0·232	0·598	0·056	0·095	0·428	0·630	
Other Causes ... ..	0·578	0·461	0·673	0·668	0·745	0·723	0·773	0·511	0·385	0·396	0·663	0·428	0·504	
Death Rates—All Causes	11·845	10·448	16·812	13·740	13·498	14·839	15·006	14·316	13·334	8·987	12·357	11·934	14·235	
Infant Mortality Rates ...	48	22	43	40	22	36	35	4	27	28	49	38	49	
Birth Rates ... ..	17·678	13·561	15·804	16·855	14·661	13·346	12·752	12·085	10·898	10·060	18·512	19·339	21·731	
MUNICIPAL WARDS	Neep- send	Firth Park	Saint Peter's	Shar- row	Broom- hill	Wood- seats	Nether Edge	Hallam	Eccles- all	Norton	Bright- side	Burn- greave	Atter- cliffe	
REGISTRATION SUB-DISTRICTS	NORTH		CENTRAL			SOUTH-WEST					NORTH-EAST			



and Persons per acre, Death Rates from all Causes and from Certain Specified Causes, and Birth Infant Mortality Rates, Year 1949.

NORTH-EAST		NORTH-WEST					EAST					City	REGISTRATION SUB-DISTRICTS
Tinsley	Darnall	Hills- boro'	Owler- ton	Walkley	Crookes- moor	Saint Philip's	Park	Manor	Heeley	Hands- worth	Moor		MUNICIPAL WARDS
15,021	19,997	27,255	16,697	16,814	16,847	8,994	18,839	30,714	18,314	33,697	9,750	513700	ESTIMATED POPULATION
1,822	800	2,072	487	334	308	214	1,049	1,402	593	3,569	238	39,598	ACREAGE
8	25	13	34	50	55	42	18	22	31	9	41	13	PERSONS PER ACRE
...	...	...	...	...	...	...	...	...	...	...	...	...	Smallpox
...	...	...	...	...	...	...	...	...	...	...	...	0·004	Measles
...	...	...	...	0·060	...	...	...	...	...	...	...	0·002	Scarlet Fever
...	...	...	...	...	...	...	...	...	...	...	...	...	Diphtheria
0·067	...	...	...	...	...	...	...	0·033	...	...	...	0·008	Whooping Cough
...	...	...	...	...	...	...	...	...	...	...	...	...	Typhoid Fever
...	...	...	...	...	...	...	...	...	...	...	...	...	Paratyphoid Fever
0·133	0·150	...	0·060	0·238	0·297	0·667	0·425	0·163	0·382	0·059	0·513	0·199	Influenza
0·133	0·150	0·037	0·060	0·060	0·297	0·111	0·053	0·033	0·109	0·089	...	0·072	Enteritis and Diarrhoea
0·932	1·000	0·734	0·539	0·416	0·534	0·445	0·212	0·358	0·491	0·564	0·615	0·539	Pneumonia
2·397	2·050	1·761	1·797	2·676	2·256	2·002	2·495	1·237	2·020	2·077	2·257	1·993	Cancer
0·466	0·250	0·514	0·419	0·773	0·534	0·222	0·637	0·814	0·328	0·238	0·615	0·440	Tuberculosis of Respira- tory System
...	0·200	...	...	0·060	...	0·111	0·053	0·033	0·055	0·119	...	0·074	Tuberculosis— Other Forms
0·067	0·050	...	0·120	0·297	0·059	0·111	0·053	...	0·055	0·059	...	0·058	Rheumatism, &c.
1·531	1·750	1·578	1·078	1·665	1·425	2·669	1·592	0·912	1·802	1·306	1·641	1·503	Diseases of { Nervous System and Sense Organs  Circulatory System  Respiratory System, except Pneumonia  Digestive System ex- cept Enteritis and Diarrhoea  Genito Urinary System except Venereal Disease  Early Infancy
4·660	4·851	4·403	3·593	5·828	4·986	7·116	5·839	2·963	5·297	3·650	5·846	4·847	
1·531	1·100	0·990	0·838	1·189	1·247	1·890	1·752	0·716	0·655	0·860	1·436	1·028	
0·067	0·400	0·257	0·120	0·357	0·712	0·222	0·212	0·195	0·273	0·238	0·410	0·269	
0·333	0·150	0·147	0·180	0·357	0·297	0·334	0·372	0·228	0·491	0·178	0·308	0·307	
0·399	0·600	0·293	0·240	0·060	0·356	0·222	0·531	0·293	0·273	0·208	0·205	0·296	
...	0·050	0·037	...	...	0·237	...	0·053	...	...	0·059	...	0·058	Suicide
0·399	0·250	0·073	0·120	0·357	0·119	0·556	0·425	0·325	0·219	0·297	0·205	0·296	Violence—except Suicide
0·599	0·500	0·440	0·419	0·119	0·415	0·556	0·318	0·488	0·491	0·801	0·308	0·526	Other Causes
13·714	13·501	11·264	9·583	14·512	13·771	17·234	15·022	8·791	12·941	10·802	14·359	12·519	Death Rates—All Causes
51	53	28	24	15	48	26	29	33	32	39	29	35	Infant Mortality Rates
18·441	19·753	14·419	12·517	16·118	16·086	17·123	20·012	16·019	15·398	16·886	17·846	15·743	Birth Rates
Tinsley	Darnall	Hills- boro'	Owler- ton	Walkley	Crookes- moor	Saint Philip's	Park	Manor	Heeley	Hands- worth	Moor	City	MUNICIPAL WARDS
NORTH-EAST		NORTH-WEST					EAST					City	REGISTRATION SUB-DISTRICTS

**TABLE X.**—*Population, Births and Deaths and Birth Rates and Death Rates in Sheffield and in England and Wales, in 1949 and previous years.*

YEAR.	POPULATION. (Estimated)	SHEFFIELD.				ENGLAND AND WALES.	
		LIVE BIRTHS.		DEATHS.		Birth Rate per 1,000 of Population	Death Rate per 1,000 of Population
		Number of Births	Birth Rate per 1,000 of Population	Number of Deaths	Death Rate per 1,000 of Population		
1851	135,310	5,946	41·6	4,027	28·2	34·2	22·0
1861	186,375	7,561	40·5	4,610	24·7	34·6	21·6
1871	241,506	9,674	40·4	6,843	28·3	35·0	22·6
1881	284,508	10,814	38·0	5,909	20·7	33·9	18·9
1891	325,547	11,862	36·4	7,775	23·9	31·4	20·2
*1901	410,151	12,766	33·0	7,891	20·4	28·5	16·9
1902	414,506	13,938	33·6	7,064	17·0	28·5	16·3
1903	418,906	14,136	33·6	7,976	19·0	28·5	15·5
1904	423,355	13,850	32·7	7,284	17·2	28·0	16·3
1905	427,850	13,082	30·6	7,510	17·6	27·3	15·3
1906	432,395	13,420	31·1	7,475	17·3	27·2	15·5
1907	436,986	14,125	32·3	7,772	17·8	26·5	15·1
1908	441,630	14,268	32·3	7,337	16·6	26·7	14·8
1909	446,321	13,296	29·8	7,098	15·9	25·8	14·6
1910	451,065	12,664	28·1	6,426	14·2	25·1	13·5
1911	455,817	12,623	27·7	7,335	16·1	24·4	14·6
*1912	466,408	12,887	27·7	6,661	14·3	23·8	13·3
1913	471,662	13,288	28·2	7,446	15·8	23·9	13·8
*1914	476,971	13,004	27·3	7,790	16·3	23·8	14·0
1915	476,012	12,139	25·5	8,173	17·2	21·8	15·7
1916	465,494	12,014	23·7	7,262	15·6	20·9	14·4
1917	469,293	11,026	21·1	6,892	14·7	17·8	14·4
1918	465,217	10,746	20·6	9,732	20·9	17·7	17·6
1919	473,695	10,353	21·0	6,564	13·9	18·5	13·7
1920	492,700	13,130	26·6	6,622	13·4	25·5	12·4
*1921	519,239	11,907	23·8	6,284	12·5	22·4	12·1
1922	522,600	10,804	20·7	6,097	11·7	20·4	12·8
1923	524,200	10,195	19·4	6,012	11·5	19·7	11·6
1924	525,000	9,712	18·5	6,110	11·6	18·8	12·2
1925	526,900	9,321	17·7	6,078	11·5	18·3	12·2
1926	523,300	9,013	17·2	5,927	11·3	17·8	11·6
1927	524,900	8,526	16·2	6,436	12·3	16·7	12·3
1928	515,400	8,438	16·4	6,099	11·8	16·7	11·7
*1929	518,000	7,976	15·4	6,850	13·2	16·3	13·4
1930	517,700	7,831	15·1	5,675	11·0	16·3	11·4
1931	517,300	7,777	15·0	5,839	11·3	15·8	12·3
1932	513,000	7,393	14·4	5,976	11·6	15·3	12·0
1933	511,820	7,178	14·0	6,117	12·0	14·4	12·3
*1934	520,950	7,530	14·5	5,886	11·4	14·8	11·8
1935	520,500	7,676	14·7	6,193	11·9	14·7	11·7
1936	518,200	7,884	15·2	6,334	12·2	14·8	12·1
1937	518,200	7,962	15·4	6,492	12·5	14·9	12·4
1938	520,000	8,144	15·7	5,906	11·4	15·1	11·6
1939	522,000	8,192	15·7	6,201	12·0	15·0	12·1
1940	496,700	7,702	15·5	7,538	15·2	15·2	14·4
1941	483,320	7,477	15·5	6,583	13·6	14·9	13·5
1942	479,400	7,958	16·6	5,697	11·9	15·8	12·3
1943	474,100	8,613	18·2	6,215	13·1	16·5	13·0
1944	474,180	10,072	21·2	5,905	12·5	17·6	12·7
1945	476,360	8,629	18·1	5,968	12·5	17·8	12·6
1946	500,400	10,073	20·1	6,167	12·3	19·1	12·0
1947	508,370	10,522	20·7	6,260	12·3	20·6	12·0
1948	514,400	9,107	17·7	5,797	11·3	17·9	10·8
1949	513,700	8,087	15·7	6,431	12·5	16·7	11·7

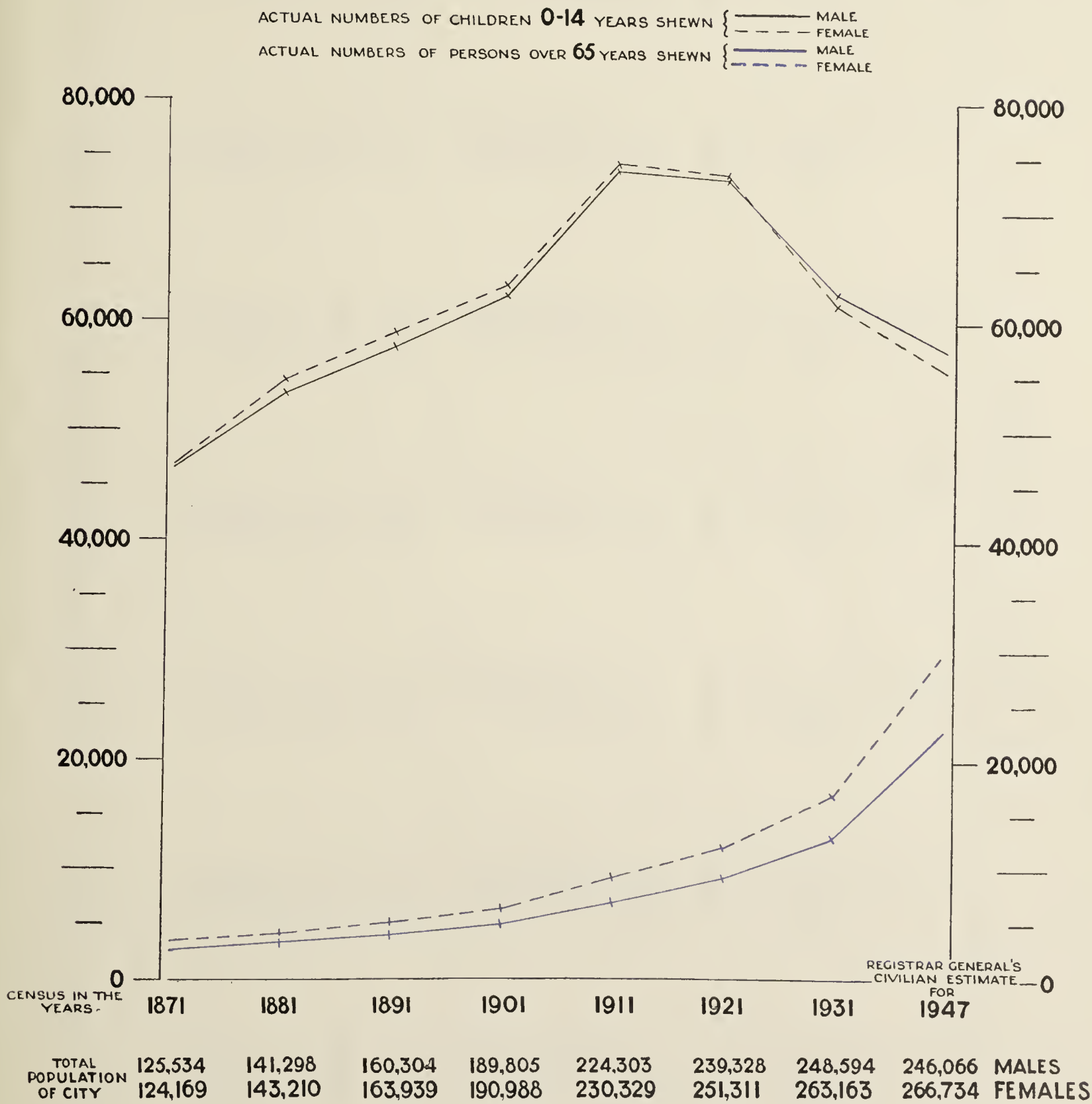
Population at earlier dates :—14,105 in 1736 ; 45,755 in 1801 ; 53,231 in 1811 ; 65,275 in 1821 ; 91,692 in 1831 ; 111,091 in 1841.

\* The City was extended on 31st October, 1901 ; 1st April, 1912 ; 1st October, 1914 ; 9th November, 1921 ; 1st April, 1929 ; and 1st April, 1934.



# CITY OF SHEFFIELD

## CHANGES IN SEX AND AGE STRUCTURE OF THE POPULATION SINCE 1871.



[The figures from which this graph has been made up appear overleaf].

CITY OF SHEFFIELD

Table showing sex and age distribution of the actual population in the years 1871, 1881, 1891, 1901, 1911, 1921, 1931, and Registrar General's estimate of civilian population for 1947.

DISTRIBUTION OF POPULATION								
Sex and age group	Census 1871	Census 1881	Census 1891	Census 1901	Census 1911	Census 1921	Census 1931	Registrar General's Civilian Estimate 1947
Males	125,534	141,298	160,304	189,805	224,303	239,328	248,594	246,066
0—14 years	46,521	53,239	57,609	62,402	73,887	73,156	62,605	57,417
15—24 "	24,482	26,480	31,414	38,858	38,985	41,719	45,116	25,082
25—34 "	21,121	22,739	25,423	32,989	38,726	35,289	40,122	40,650
35—44 "	14,898	17,588	20,246	23,705	31,888	35,032	32,799	42,332
45—54 "	9,925	11,299	13,782	16,914	20,963	28,546	31,666	32,985
55—64 "	5,649	6,511	7,642	9,720	12,680	16,209	23,270	25,058
65—74 "	2,403	2,790	3,353	4,211	5,778	7,471	10,330	16,998
75—84 "	492	603	785	933	1,296	1,781	2,487	5,135
85 and over	43	49	50	73	100	125	199	409
Females	124,169	143,210	163,939	190,988	230,329	251,311	263,163	266,734
0—14 years	46,880	54,502	58,938	63,394	74,464	73,550	61,573	55,505
15—24 "	23,630	27,447	33,087	39,466	41,712	46,492	49,024	32,167
25—34 "	19,847	21,697	25,392	32,187	39,389	39,067	42,760	41,593
35—44 "	14,316	16,651	18,943	22,734	31,038	35,916	36,133	42,636
45—54 "	9,762	11,390	13,704	16,224	20,886	27,494	33,226	36,309
55—64 "	5,982	7,175	8,322	10,302	13,265	16,659	23,601	29,017
65—74 "	2,934	3,372	4,311	5,082	7,297	8,919	12,418	21,096
75—84 "	744	913	1,145	1,494	2,046	2,913	4,017	7,328
85 and over	74	63	97	105	232	301	411	1,083
TOTALS ..	249,703	284,508	324,243	380,793	454,632	490,639	511,757	512,800



CITY OF SHEFFIELD

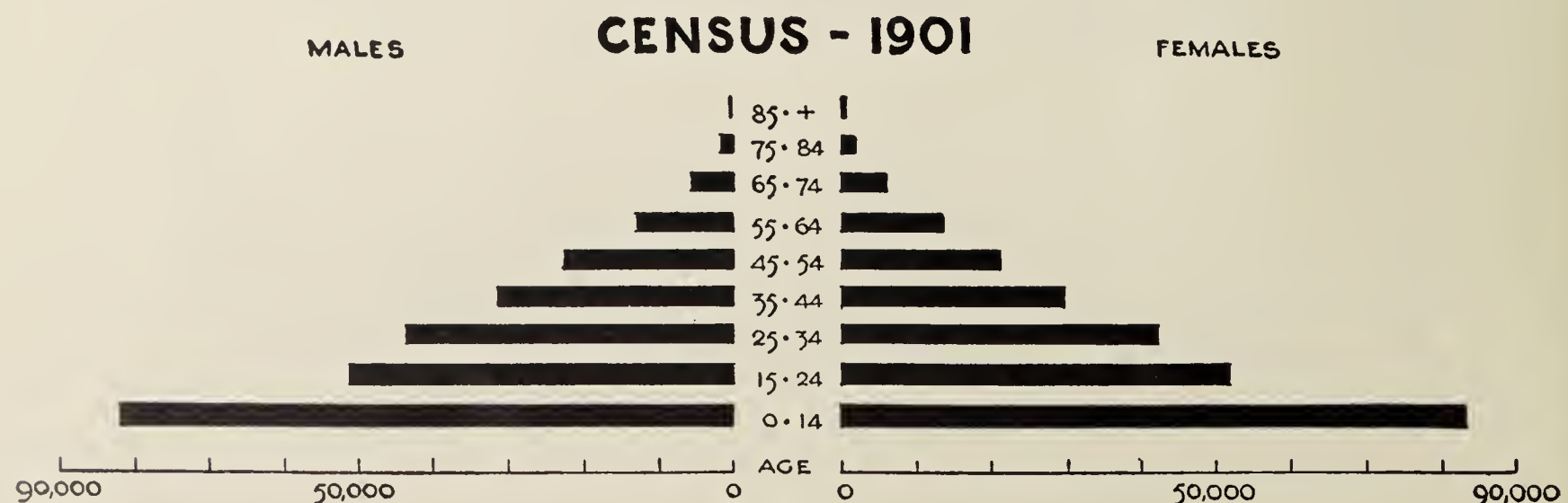
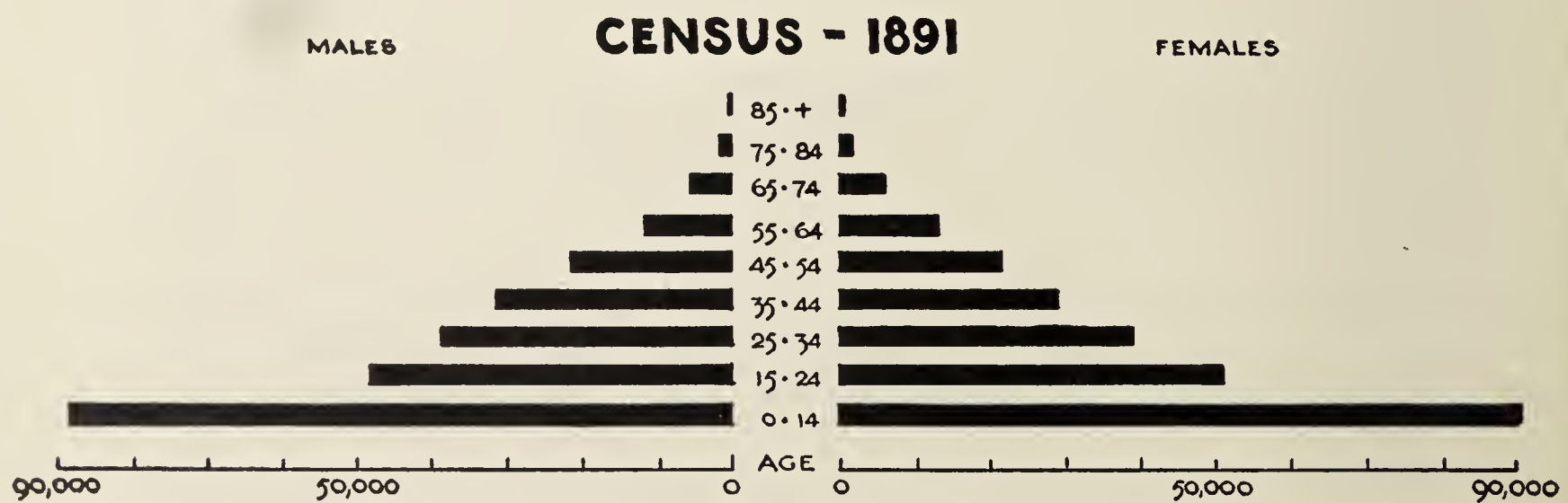
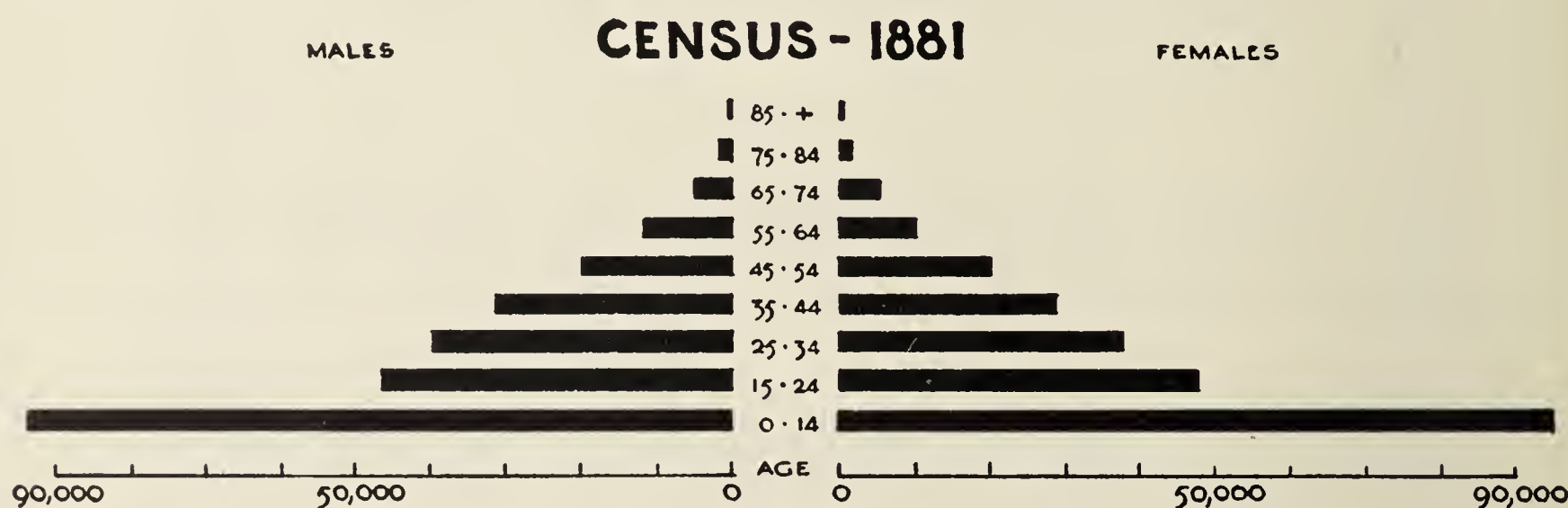
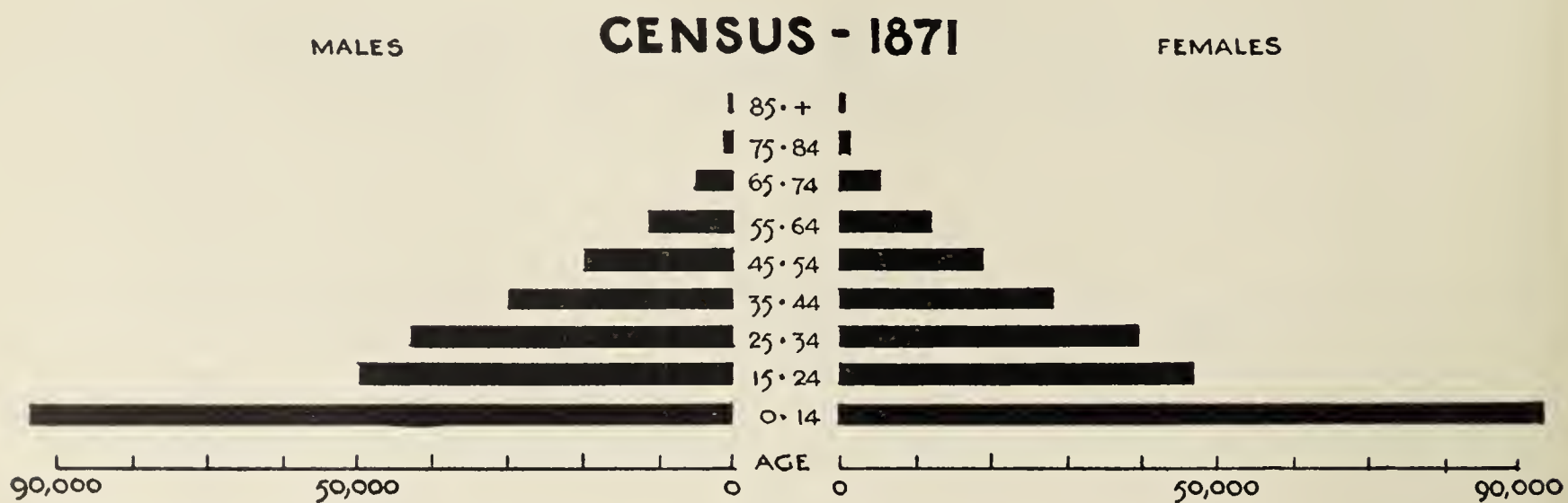
Table showing sex and age distribution of the population calculated per 500,000 persons in the years 1871, 1881, 1891, 1901, 1911, 1921, 1931 and 1947.

Sex and age group	DISTRIBUTION OF POPULATION							
	Census 1871	Census 1881	Census 1891	Census 1901	Census 1911	Census 1921	Census 1931	Estimate 1947
<b>Males</b>	<b>251,367</b>	<b>248,320</b>	<b>247,197</b>	<b>249,223</b>	<b>246,685</b>	<b>243,894</b>	<b>242,883</b>	<b>242,149</b>
0—14 years	93,153	93,563	88,836	81,937	81,260	74,552	61,167	55,505
15—24 "	49,022	46,536	48,442	51,022	42,875	42,515	44,080	4,279 <sup>*</sup>
25—34 "	42,293	39,963	39,204	43,316	42,590	35,962	39,200	24,246
35—44 "	29,831	30,909	31,220	31,126	35,070	35,700	32,046	39,296
45—54 "	19,874	19,857	21,253	22,209	23,055	29,091	30,938	40,922
55—64 "	11,311	11,443	11,785	12,763	13,945	16,518	22,735	31,886
65—74 "	4,812	4,903	5,170	5,529	6,355	7,614	10,093	24,223
75—84 "	985	1,060	1,210	1,225	1,425	1,815	2,430	16,433
85 and over	86	86	77	96	110	127	194	4,964
								395
<b>Females</b>	<b>248,633</b>	<b>251,680</b>	<b>252,803</b>	<b>250,777</b>	<b>253,315</b>	<b>256,106</b>	<b>257,117</b>	<b>257,851</b>
0—14 years	93,872	95,783	90,885	83,239	81,895	74,953	60,158	53,656
15—24 "	47,316	48,236	51,022	51,821	45,875	47,379	47,897	31,096
25—34 "	39,741	38,130	39,156	42,263	43,320	39,812	41,778	40,208
35—44 "	28,666	29,263	29,211	29,851	34,135	36,601	35,303	41,216
45—54 "	19,547	20,017	21,132	21,303	22,970	28,019	32,463	35,100
55—64 "	11,978	12,609	12,833	13,527	14,590	16,977	23,059	28,051
65—74 "	5,875	5,926	6,648	6,673	8,025	9,089	12,133	20,393
75—84 "	1,490	1,605	1,766	1,962	2,250	2,969	3,925	7,084
85 and over	148	111	150	138	255	307	401	1,047

\* Estimate of males in this age group undergoing military training.

# CITY OF SHEFFIELD

TABLE SHOWING SEX AND AGE DISTRIBUTION OF THE  
POPULATION CALCULATED PER 500,000 PERSONS IN THE YEARS  
1871 · 1881 · 1891 · 1901 · 1911 · 1921 · 1931 AND 1947.



[The figures from which this pyramid has been made up appear on the preceding page].



# CITY OF SHEFFIELD

TABLE SHOWING SEX AND AGE DISTRIBUTION OF THE  
POPULATION CALCULATED PER 500,000 PERSONS IN THE YEARS  
1871 · 1881 · 1891 · 1901 · 1911 · 1921 · 1931 AND 1947

MALES

## CENSUS - 1911

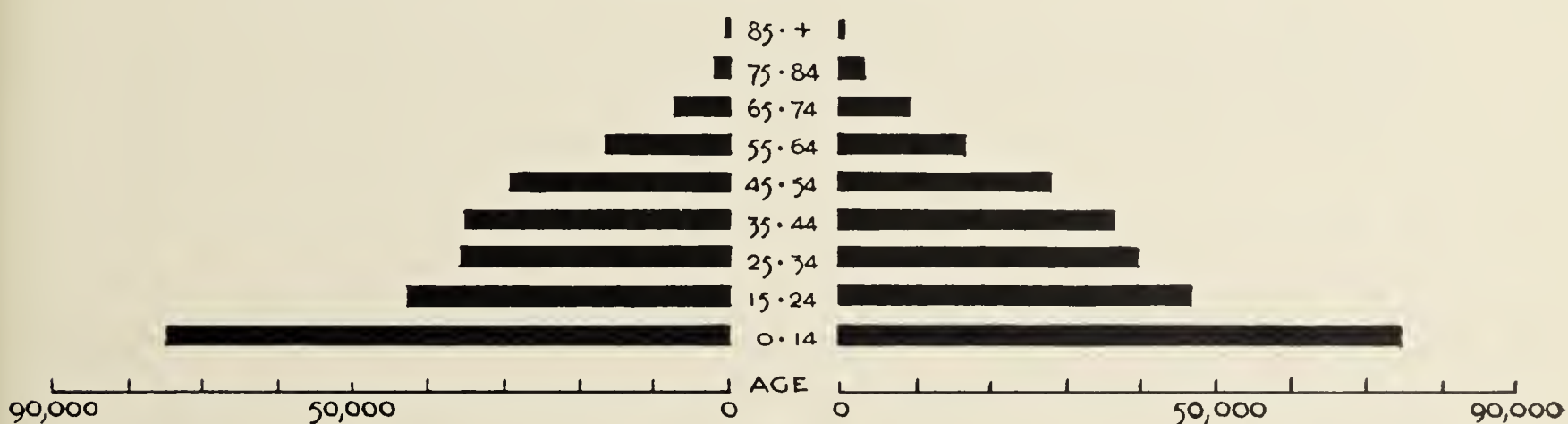
FEMALES



MALES

## CENSUS - 1921

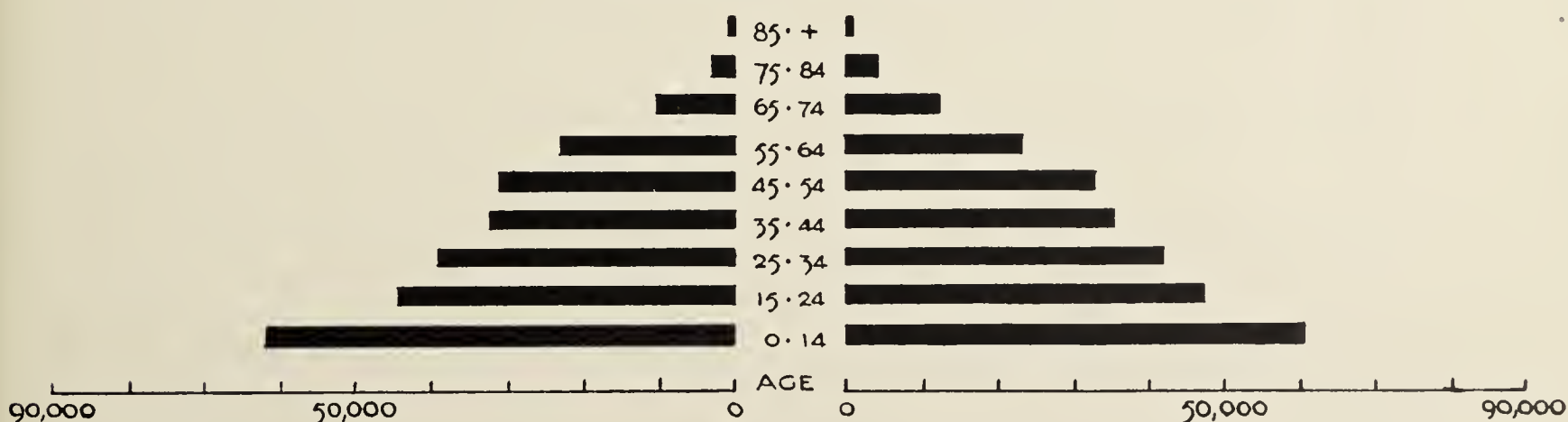
FEMALES



MALES

## CENSUS - 1931

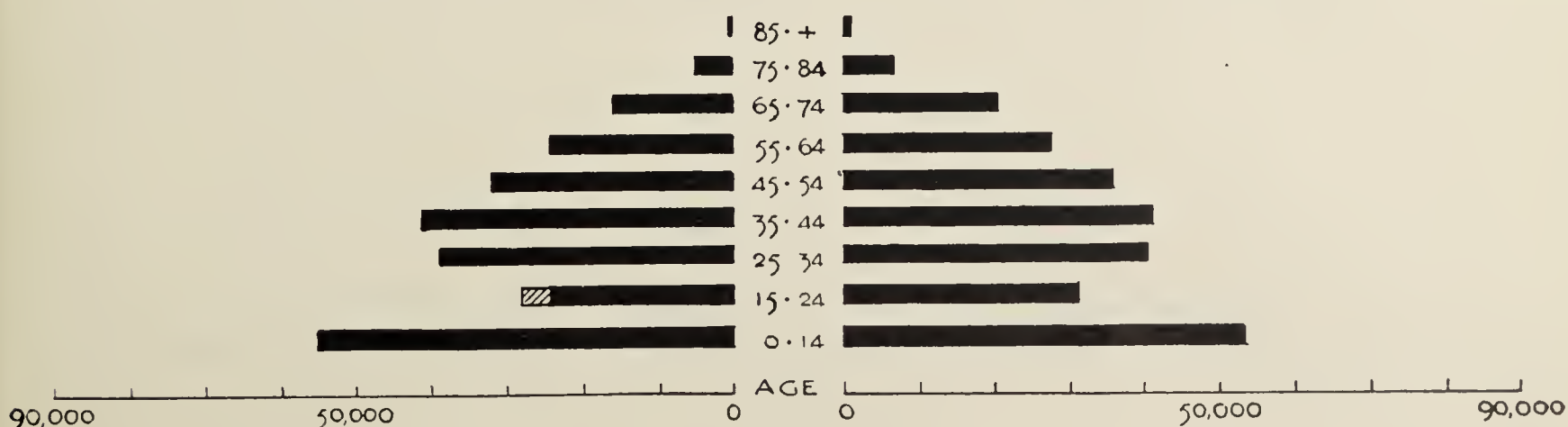
FEMALES



MALES

## ESTIMATE - 1947

FEMALES



THE HATCHED PORTION IN THE 1947 DIAGRAM REPRESENTS  
ESTIMATED NUMBER OF MEN IN H.M.SERVICE





ACUTE RHEUMATISM REGULATIONS, 1947.

REPORT UPON THE INVESTIGATION OF CASES OF ACUTE RHEUMATISM NOTIFIED  
IN THE YEAR 1949 AMONGST SHEFFIELD CHILDREN.

By E. L. M. MILLAR, M.D., M.Sc., D.P.H.

During the year 1949, 52 children were notified as suffering from Acute Rheumatism. Only 44 of these were classified as properly notifiable under the regulations. Of the eight non-rheumatic children, seven were found to be neither rheumatic nor cardiac cases. In the remaining case the diagnosis was uncertain, but it was probably not rheumatism.

Of the 44 confirmed cases, seven were suffering their second attack, the first attack having occurred in : 1940 (one case), 1942 (one case), 1945 (three cases), 1946 (one case), and 1948 (one case). None of these previous attacks had been notified. (Notification began on 1st October, 1947). The condition of these seven when notified in 1949 was :—

Chorea without carditis	..	..	..	..	..	1
Rheumatic pain without carditis	..	..	..	..	4	
Rheumatic pain with active carditis	..	..	..	..	2	

Of the 37 cases who had suffered only one attack of acute rheumatism, the heart was affected in 23 and not affected in 14.

42 of the 44 confirmed cases had an active form of acute rheumatism during 1949, the remaining two cases having a quiescent form of rheumatic heart disease which resulted from an acute rheumatic attack in earlier years. These figures compare with 70 cases of active rheumatism, and 46 cases of quiescent heart disease notified and confirmed in 1948.

There is good reason to believe that the notification of Acute Rheumatism in Sheffield, as required by the Regulations, has been very nearly complete.

Amongst the 44 cases confirmed in 1949, were seven cases of chorea (three boys and four girls). In only one of these, a boy, was the heart affected.

**The Control Series.**—In order to investigate the effect of social conditions upon the incidence of acute rheumatism, a comparison was made between the social conditions of the rheumatic children and the social conditions of a random sample of non-rheumatic school children. This control series was obtained as follows : during 1949, the parents of all school children whose birthdays fall on 1st January and 1st June were requested to supply information similar to that requested of the parents of the rheumatic children. During 1948, a similar enquiry had been made in respect of all school children whose birthdays fall on 1st March and 1st September. 195 (1948) and 157 (1949)—a total of 352 controls—were investigated in this way. Their sex distribution was :—

Year	Males	Females	Total
1949 .. .. .	73	84	157
1948 .. .. .	104	91	195
		TOTAL	352

SOCIAL CONDITIONS.

**Housing.**—An investigation into the housing conditions of cases and controls resulted in adverse housing conditions being found as follows :—

Condition	1949			1948			Controls		
	(44 cases)			(116 cases)			(352 in number)		
	*			*			*		
Back to back .. .. .	4	( 9·09%)		13	(11·21%)		29	( 8·24%)	
Condemned .. .. .	5	(11·36%)		15	(12·93%)		33	( 9·37%)	
Poor Structure .. .. .	1	( 2·27%)		12	(10·34%)		29	( 8·24%)	
Dark .. .. .	2	( 4·54%)		9	( 7·76%)		12	( 3·41%)	
Damp .. .. .	7	(15·91%)		27	(23·27%)		72	(20·45%)	
Overcrowded .. .. .	4	( 9·09%)		12	(10·34%)		26	( 7·39%)	
Dirty .. .. .	12	(27·27%)		18	(15·52%)		75	(21·31%)	
Number of houses showing one or more of the above defects ..	23	(52·27%)		55	(47·41%)		158	(44·89%)	

\* Cases expressed as percentages of total cases.

The results of comparing the conditions experienced by the 44 rheumatic cases of 1949, the 116 cases of 1948, and the 352 controls, are of particular interest. The control children are a cross-section of the school population, and it is surprising to find the high percentage who live under adverse housing conditions. However, on the whole, the rheumatic cases are subject to no worse housing conditions than the average Sheffield child.

The following statement is given as a matter of interest. It relates only to the housing conditions of controls and shows the presence of multiple defects in houses that are : condemned, back to back, of poor structure or dark. Similar multiple defects occur in the houses of the rheumatic cases.

Condition of house			TOTALS	Back to back	Condemned	Poor structure	Dark	Damp	Over-crowded	Dirty
Back to back	...		29	—	25	21	9	10	6	8
Condemned	...		33	25	—	20	8	13	7	9
Poor structure	...		29	21	20	—	12	16	4	10
Dark	...	...	12	9	8	12	—	5	2	4
Damp	...	...	72	10	13	16	5	—	5	17
Overcrowded	...		26	6	7	4	2	5	—	10
Dirty	...	...	75	8	9	10	4	17	10	—

**Overcrowding.**—The size of the houses occupied by the families of cases and of controls was investigated. The following statement shows no significant difference between them.

		H A B I T A B L E   R O O M S							
		1 room	2 rooms	3 rooms	4 rooms	5 rooms	6 rooms	More than 6 rooms	Number not known
1949 cases (44)	...	Nil	1 (2·27%)	11 (25·00%)	15 (34·09%)	11 (25·00%)	3 ( 6·82%)	2 (4·50%)	1 (2·27%)
1948 cases (116)	...	Nil	3 (2·58%)	12 (10·34%)	37 (31·90%)	42 (36·21%)	11 ( 9·48%)	7 (6·03%)	4 (3·44%)
Controls (352)...	...	Nil	13 (3·69%)	41 (11·65%)	117 (33·24%)	120 (34·09%)	46 (13·07%)	15 (4·26%)	—

The average number of persons per room, i.e., total number of persons, divided by total number of rooms (excluding kitchen and bathroom), was calculated and used as a means of comparing the extent of overcrowding in the homes of cases and controls.

			0·5 and less	0·75 and more than 0·5	1 and more than 0·75	1·25 and more than 1	1·5 and more than 1·25	1·75 and more than 1·5	2 and more than 1·75	3 and more than 2	Inform-ation not available
1949 cases (44) ... ..	1	(2%)	4	( 9%)	13 (30%)	7 (16%)	5 (11%)	3 (7%)	5 (11%)	5 (11%)	1 (2%)
1948 cases (116) ... ..	2	(2%)	11	( 9%)	39 (34%)	17 (15%)	15 (13%)	11 (9%)	10 ( 9%)	7 ( 6%)	4 (3%)
Controls (352) ... ..	12	(3%)	60	(17%)	109 (31%)	47 (13%)	53 (15%)	33 (9%)	26 ( 7%)	12 ( 3%)	0 (0%)

It appears that overcrowding is not significantly more prevalent amongst the families of the cases than of the controls.



**Social Status, Income, etc.**—An attempt was made to compare the degree of poverty or of wealth as between the families of the cases and of the controls. For this purpose the Registrar General's classification of occupations into social classes was used :—

Class I	..	..	..	..	Professional, etc.
Class III	..	..	..	..	Skilled Workers.
Class V	..	..	..	..	Unskilled Workers.

Classes II and IV are intermediate between Classes I and III, and III and V, respectively.

In studying the income of the family, an attempt was made to eliminate the cost of accommodation and the effect of variations in family size by calculating in respect of each case the family income (minus rent) per head. The percentages of cases and of controls falling into each social class and into each income group were closely similar.

Nearly half the cases of acute rheumatism have arisen in social class III. This does not represent a heavy incidence amongst the children of skilled workmen, but occurs because the large middle-class population of the City is made up of such families, as the control series shows.

Our figures do not show Acute Rheumatism as a disease of poverty. This is not the generally accepted view. The distribution of Sheffield cases amongst the various income groups corresponds roughly to the distribution of the school children as a whole amongst the same income groups.

**Social Conditions.**—44 cases in 1949, 116 cases in 1948, and 352 controls.

<i>Social Status.</i>	Numbers and percentages in each group		
	44 cases in 1949	116 cases in 1948	352 controls
Class 1 ... ..	Nil	1 ( 0·86%)	4 ( 1·14%)
„ 2 ... ..	1 ( 2·27%)	1 ( 0·86%)	17 ( 4·83%)
„ 3 ... ..	24 (54·54%)	53 (45·69%)	185 (52·56%)
„ 4 ... ..	7 (15·91%)	30 (25·86%)	70 (19·89%)
„ 5 ... ..	6 (13·63%)	22 (18·96%)	58 (16·48%)
Others ... ..	6 (13·63%)	9 ( 7·76%)	18 ( 5·11%)
<i>Family Income minus rent.</i>			
Income between 5/- and 10/- per head ... ..	Nil	2 ( 1·72%)	1 ( 0·28%)
„ „ 10/- and 15/- per head ... ..	Nil	9 ( 7·76%)	11 ( 3·12%)
„ „ 15/- and £1 per head ... ..	5 (11·36%)	26 (22·41%)	55 (15·62%)
„ „ £1 and 30/- per head ... ..	17 (38·64%)	43 (37·07%)	135 (38·35%)
„ over 30/- per head ... ..	21 (47·73%)	34 (29·31%)	147 (41·76%)
„ not known ... ..	1 ( 2·27%)	2 ( 1·72%)	3 ( 0·85%)

**The Employment of the Mother**, whilst improving the family income, might on occasions lead to neglect of the home and of the children. The amount of employment amongst mothers of the cases and of the controls was compared, but there was no notable difference between the two.

<i>Employment of Mother.</i>	Numbers and percentages in each group		
	44 cases in 1949	116 cases in 1948	352 controls
Full time ... ..	9 (20·45%)	14 (12·01%)	39 (11·08%)
Part-time ... ..	9 (20·45%)	25 (21·55%)	57 (16·19%)
None ... ..	25 (56·82%)	75 (64·65%)	253 (71·87%)
Mother dead, etc. ... ..	1 ( 2·27%)	2 ( 1·72%)	3 ( 0·85%)

**Age of Mother.**—The cases and the controls were distributed in accordance with the age of the mother when the child was born. There was a greater proportion of older women amongst mothers of the rheumatic cases than amongst mothers of the controls. The figures, being small, are however inconclusive. The fairly wide variations between comparative figures for the 1949 and 1948 cases, in this and other tables, bear out this point.

GROUP	AGE OF MOTHER WHEN CHILD WAS BORN					Mother now dead
	20	21 — 25	26 — 35	36 — 45	46 and over	
1949 cases (44) ... ..	2 (4·54%)	15 (34·09%)	17 (38·64%)	10 (22·72%)	Nil	Nil
1948 cases (116) ... ..	6 (5·17%)	30 (25·86%)	59 (50·86%)	18 (15·52%)	1 (0·86%)	2 (1·72%)
352 Controls ... ..	25 (7·10%)	82 (23·30%)	198 (56·25%)	42 (11·93%)	Nil	5 (1·42%)

TABLE XI.—*Tabulation by Age, Sex and Clinical Classification of Cases notified as Acute Rheumatism during the year 1949.*

CLINICAL CLASSIFICATION OF CASE NOTIFIED	AGE IN YEARS								TOTALS All Ages		TOTAL BOTH SEXES
	0—4		5—9		10—14		15 and over		M	F	
	M	F	M	F	M	F	M	F			
1. Rheumatic Pains and/or Arthritis without heart disease ... ..	—	—	1	4	4	4	—	—	5	8	13
2. Rheumatic Heart Disease (Active) :—											
(a) with polyarthritis ...	—	—	5	6	5	2	—	—	10	8	18
(b) with chorea ... ..	—	—	—	—	1	—	—	—	1	—	1
(c) no other rheumatic manifestation ... ..	—	1	—	2	1	—	—	—	1	3	4
3. Rheumatic Heart Disease (Quiescent)... ..	—	—	—	—	1	1	—	—	1	1	2
4. Rheumatic Chorea (alone)	—	—	1	1	1	3	—	—	2	4	6
TOTAL RHEUMATIC CASES	—	1	7	13	13	10	—	—	20	24	44
5. Congenital Heart Disease	—	—	—	—	—	—	—	—	—	—	—
6. Other non-rheumatic heart disease or disorder ...	—	—	—	—	—	—	—	—	—	—	—
7. Not rheumatic or cardiac disease ... ..	—	2	2	—	1	2	—	—	3	4	7
TOTAL NON-RHEUMATIC CASES ... ..	—	2	2	—	1	2	—	—	3	4	7
DIAGNOSIS UNCERTAIN. NOT ASSESSED UNTIL ALMOST RECOVERED, BUT PROBABLY NOT RHEUMATISM ... ..	—	—	1	—	—	—	—	—	1	—	1



## MATERNITY AND CHILD WELFARE

(Care of Mothers and Young Children)

In the administration of the Maternity and Child Welfare Services there were three principal Municipal clinics at 31st December, 1949, these being the City Maternity and Child Welfare Centre at Orchard Place and the Firth Park and Manor Centres. At the end of the year, there were also 15 subsidiary Centres located at suitable points so that, as far as was practicable, they covered the extent of the City.

An aggregate of 6,474 women attended during the year at the ante-natal clinics provided at these Maternity and Child Welfare Centres. This compares with an aggregate of 8,115 in 1948.

There is also an ante-natal clinic at the City General Hospital administered by the Regional Hospital Board. When arrangements have been made for an expectant mother to have her confinement in this hospital, her records are transferred to the ante-natal clinic there, and her continued ante-natal care is the responsibility of the medical staff at the hospital. The 1949 figures of attendances at the Council's clinics included 1,285 of such women, and the 1948 figures included 1,162. In addition there is an ante-natal clinic at the Jessop Hospital for Women.

Patients who arrange for home confinement and engage the services of a Municipal Midwife continue attendance at one of the Corporation ante-natal clinics. In each case, the midwife is furnished with a copy of the patient's ante-natal notes following her clinic medical examination, and, on each subsequent visit, a report on the patient's progress is forwarded to the midwife. After the confinement, the midwife returns the patient's notes to the Centre, together with a report on the condition of mother and baby at the confinement and during the puerperium. This information is of value to the clinic on the re-attendance of a patient in subsequent pregnancies.

Many expectant mothers are sent to the clinic by their registered medical practitioners for ante-natal supervision, and co-operation between the medical practitioner and the clinic is maintained. The medical practitioner is informed of all cases where the patient has a Rhesus negative report, and he is also supplied with reports in certain other Rhesus abnormalities.

The following statement, which has been furnished by the Sheffield Regional Hospital Board, gives information with regard to confinements of Sheffield women, which took place in the year 1949 in the Maternity Hospitals which have been transferred from the administration of the City Council to that of the Board. Included in the statement is information which has been furnished by the Jessop Hospital.

Year 1949	City General Hospital	Nether Edge Hospital	Jessop Hospital for Women
Number of women whose confinements took place in the hospital .. ..	1,488	873	1,198
Number of live births resulting from these confinements .. .. .	1,460	869	1,170
Number of still births resulting from these confinements .. .. .	80	13	47

There were 15,583 children under five years of age who attended the Infant Welfare Clinics during the year 1949, the figure for 1948 being 15,940.

### NOTIFICATION OF BIRTHS.

Compulsory notification of births is a requirement under the Public Health Act, 1936. Notifications of 8,598 live births and 209 still births, making a total of 8,807 births, were received in the year 1949. These births were attended as follows :—

#### At Home—

By Private Medical Practitioners .. .. .	1,699
By Midwives .. .. .	2,433
	—————

4,132

In Nursing Homes .. .. . 404

#### In Hospitals—

City General Maternity Hospital .. .. .	1,619
Nether Edge Maternity Hospital. . . . .	898
Jessop Hospital for Women .. .. .	1,754
	—————

4,271

8,807

It should be explained that the obligation to notify applies to all births occurring in the City, whether amongst Sheffield residents or otherwise, and that the foregoing figures, therefore, contain a certain proportion of births relating to cases where the mother was only temporarily resident in the City, hence the discrepancy between the numbers shown above and those appearing elsewhere in the Report.

### MATERNITY CLINICS.

BY ANN KIRK BLACK, M.B., Ch.B.

Senior Assistant Maternity and Child Welfare Medical Officer.

**Ante-natal Clinics.**—Ante-natal sessions are held at eight of the Maternity and Child Welfare Centres and, during the year, 2,404 sessions were held and patients made 37,494 attendances (giving an average of 15·6 per session), as compared with 49,405 in 1948. 4,964 women attended for the first time, as compared with 6,041 in 1948. This decline in both patients and attendances is mainly due to the reduction in the number of births.

Expectant mothers attending the clinics are recommended for admission to the maternity units at the City General and Nether Edge Hospitals, in accordance with the regulations laid down by the Sheffield Regional Hospital Board. First priority is given to patients who require admission on medical and obstetric grounds; consideration is then given to patients for whom admission is requested on sociological grounds. The Health Visitors give assistance in the determination of need for hospital treatment on sociological grounds by visiting the homes, and reporting on the suitability of the house for confinement arrangements. There is close association between the two hospitals and the Council's ante-natal clinics with regard to the admission of patients, both for treatment of ante-natal conditions which arise while patients are under the care of the clinic, and for confinement. Patients who are to be admitted to the City General Hospital for confinement are transferred from the Maternity and Child Welfare ante-natal clinic to the ante-natal clinic held at the hospital.

Many of the expectant mothers request the services of Municipal Midwives to attend either in the capacity of midwife or maternity nurse. Details are given in the section of the Report dealing with midwives, regarding engagement of Municipal Midwives and also of their work.

It has been the practice, at the Maternity and Child Welfare Centre ante-natal clinics, for a Health Visitor to be in attendance with the Medical Officer at the examination of patients, but, in order to give the Municipal Midwives all the experience possible in ante-natal work, arrangements have been made for the midwives to attend certain ante-natal sessions, in rota, in place of Health Visitors. This scheme is working well and should prove of value as an additional link between the district midwife and the clinic.

Ante-natal patients attending the clinic are always under the supervision of a doctor.

The figures below show attendances at the various Centres, and include certain cases later transferred to the ante-natal clinic at the City General Hospital.

#### ATTENDANCES AT ANTE-NATAL CLINICS.

Centre			Total New Cases		Total Attendances of all Cases		† No. of Sessions		Average Attendances per Session
Orchard Place	..	..	4,306	..	17,334	..	991	..	17
Firth Park	..	..	338	..	5,994	..	437	..	14
Manor	..	..	320	..	5,045	..	286	..	18
Woodhouse	..	..	—	..	361	..	49	..	7
Carbrook	..	..	—	..	2,786	..	197	..	14
Abbeydale	..	..	—	..	2,131	..	194	..	11
Hillsborough	..	..	—	..	3,587	..	201	..	18
Tinsley	..	..	—	..	256	..	49	..	5
			<hr/>				<hr/>		
			4,964	..	37,494	..	2,404	..	15·6
			<hr/>				<hr/>		

† In certain instances these are part sessions only, relating to combined ante-natal and infant welfare clinics.



Comparative figures of new cases and attendances at the ante-natal clinics at the Maternity and Child Welfare Centres during the last five years are given in the following statements :—

Year.						New Cases.	Total Attendances of all Cases.	
1945	..	..	..	..	..	6,482	..	46,005
1946	..	..	..	..	..	7,736	..	55,975
1947	..	..	..	..	..	6,968	..	51,475
1948	..	..	..	..	..	6,041	..	49,405
1949	..	..	..	..	..	4,964	..	37,494

**Post Natal Clinics.**—There has been an effort during the year to persuade mothers to realise the value of post-natal examination about six weeks after confinement, and it is very gratifying to note that the number of patients in 1949 has increased considerably. In 1949 there were 936 new patients at the post-natal clinic as compared with 337 in 1948.

On discharge from Nether Edge Maternity Hospital, patients are invited to attend one of the Council's clinics, and the Municipal Midwives also advise their patients to attend, pointing out the value of the post-natal examination ; there has been considerable response from these sources. The City General Hospital arrange for their own patients to attend the hospital post-natal clinic.

Increasing importance is being placed upon post-natal examination, in the interests of the mother, and medical practitioners are now required to give this service to their patients about the sixth week after confinement.

Particulars follow relating to the attendances at post-natal clinics at the Maternity and Child Welfare Centres during 1949 :—

#### ATTENDANCES AT POST-NATAL CLINICS.

Centre			Total New Cases	Total Attendances of all Cases	No. of Sessions
Orchard Place	..	..	599	959	56
Firth Park	..	..	150	176	49
Manor	..	..	187	244	56
TOTALS			936	1,379	161

**Birth Control Clinic.**—Nine new cases attended the Birth Control Clinic during the year, and eighteen attendances were made.

**Laboratory Tests.**—It is part of the routine work of the ante-natal clinics to take samples of blood from all patients for the Wassermann and Rhesus tests.

**Wassermann tests** are carried out at the Public Health Laboratory, and, during the year, 5,023 specimens from 4,920 patients were examined. In addition, 132 Kahn tests were carried out. There were 26 new cases of expectant mothers with a positive Wassermann result, as compared with 38 in 1948. In these cases, treatment was arranged as early as possible in order to give the mother every chance of having a healthy baby. In certain of the positive cases, a sample was also taken from the husband, and where this proved positive, hospital treatment was arranged.

**The Rhesus Factor.**—Everyone belongs to one of the four blood groups, namely : A, B, O or AB, and this is due to the presence of certain substances in the red blood cells. In addition, there is another substance, known as the Rhesus Factor, which is found in the red blood cells of approximately 85 of every 100 persons of each blood group. Such people are said to be Rhesus positive, while the remaining 15 persons are described as Rhesus negative.

The existence of the Rhesus factor in the blood was first discovered in 1941. These factors are inherited from parents in a similar manner to the inheritance of the colour of the eyes and hair.

When a mother requires blood transfusion, it is essential that compatible blood be given—which means that the blood donor must be of the same blood group and Rhesus type as the mother.

The Rhesus factor is of importance in midwifery. If the mother and father are both rhesus negative, any child born can only be rhesus negative and no difficulty arises. If the mother is rhesus positive and the father is rhesus negative, then the child suffers no ill effect ; but, if the mother is rhesus negative and the father rhesus positive, the child may be rhesus positive, and difficulty may occur. The effect in this case is that incompatible substances may be manufactured by the mother, because of the action of the rhesus positive factor in the blood of the foetus, and these incompatible substances may then pass from the mother to the child and destroy the child's blood corpuscles—giving rise to a very severe type of anæmia and dropsy in the baby.

A similar type of difficulty may arise if a rhesus negative mother is transfused with rhesus positive blood. The resulting antibodies may affect a child of a subsequent pregnancy.

When a Rhesus baby is born and is found to be suffering from anæmia or jaundice, an exchange transfusion of blood is given ; a measured volume of blood is drained from the cord and immediately replaced with Rhesus negative blood obtained from a Rhesus negative blood donor.

During the year 1949 there were 5,056 specimens of blood sent from the ante-natal clinics to the National Blood Transfusion Laboratory for the ascertainment of the Rhesus factor. These samples were mostly from expectant mothers, but in a number of negative cases a sample was sent from the husband, and, in a few special cases, from various members of the family, for research purposes.

In multiparous cases with a negative Rhesus factor, a further sample is required by the Blood Transfusion Laboratory at about the 32nd week of pregnancy, and, in a number of these cases, another sample is required from mother and baby on delivery. The district midwives have received instructions on the collection of these samples during attendance at confinement.

All expectant mothers are supplied with cards showing their blood grouping and Rhesus factor so that, on admission to hospital at any time, they can supply the hospital with information which would be of value in case of need for blood transfusion.

There were 734 Rhesus negative reports on patients who were due for confinement in 1949 and who, at some time during their pregnancy, had attended the ante-natal clinic. 26 of these Rhesus negative cases had an antibody present which necessitated hospital confinement on account of the possibility of the baby suffering from hæmolytic disease of the newborn. These patients had confinements as follows—22 normal, 1 Cæsarean Section, 2 breech and 1 forceps. 23 of the 26 mothers had full-time confinements and three had premature confinements. There were 23 children born alive (including one set of twins) and four were stillborn (three macerated and one hydrops foetalis). Of the 23 children born alive, five died of hæmolytic disease of the newborn, two of these babies had been given replacement transfusion. Of the 18 remaining children, nine were jaundiced and received blood transfusions and the condition of the other nine was satisfactory and blood transfusion was not required. All 18 children were discharged well.

**Miscellaneous Tests.**—The Public Health Laboratory carried out further tests as required in connection with clinic work, namely : examination of 194 swabs and samples (ear, nose, throat, etc.) and 31 smears (cervix and urethra) ; 105 specimens of urine were examined for organisms.

The Laboratory at the Firth Auxiliary Hospital, Norton, also carried out nine Zondek Ascheim tests for ascertainment of pregnancy.

**Maternity Patients and Hospital Treatment.**—In addition to patients sent to the City General and Nether Edge Maternity Hospitals for ante-natal treatment when necessary, and for confinement, three patients were referred from the Maternity and Child Welfare Centres to the Skin Department of the Royal Infirmary, 44 were sent to the Chest Clinic for examination of the chest, and 383 to the City General Hospital or Nether Edge Hospital for X-ray examination. There were also 253 who were sent from the Centres for dental treatment ; the majority to the School Dental Clinic under arrangements between the Health and Education Committees, but, in emergency, a few to the Royal Hospital Dental Clinic.

In addition to the 44 patients referred to the Chest Clinic for X-ray, a number of positive or quiescent cases were referred to the Centre by Dr. Turner, of the Chest Clinic, on account of possible pregnancy.



Of the chest cases dealt with, five were tuberculosis positive and 15 were tuberculosis negative or quiescent. Of these patients, 18 had normal confinements in hospital and two had the pregnancy terminated in the early weeks. Eight patients had some period of Sanatorium treatment during the ante-natal period, and four returned to Sanatorium after delivery in hospital.

**Expectant Mothers—Care of Children.**—This scheme, which commenced in November, 1935, provides for the admission of young children to the Sheffield Children's Homes in cases where there is difficulty in making other arrangements for the children during the confinement and lying-in period of the mother, or where the mother has to be admitted to hospital for ante-natal treatment.

The making of arrangements for the admission of these children to the Homes has been transferred from the Maternity and Child Welfare Centre to the Children's Department. There is, however, very close co-operation between the two departments, as the Maternity and Child Welfare Centre refers expectant mothers to the Children's Officer, in difficult cases, and the Children's Department furnishes the Centre with information as to admission and discharge of children in maternity cases.

During the year 1949, there were 22 children from nine families admitted to the Homes under these arrangements.

In certain cases where it was impossible to admit children to the Homes, or where the provision of care was required for day time only, arrangements were made with the Matrons of the Council's Nurseries for the admission of children to the various nurseries. This scheme was of great assistance in many cases, and relieved the anxiety of the mother regarding the care of her children while the father was at work.

**Special Certificates for Expectant Mothers.**—During the year 1949, the supply of certificates to enable expectant mothers to obtain the priorities ration book was continued. In November, 1944, at the request of the Ministry of Health, distribution of dockets authorising the purchase of sheets was undertaken for expectant mothers having their confinements at home. In such cases, a certificate that there was need for the purchase was issued by the midwife. The issuing of these dockets ceased in March, 1949.

### INFANT WELFARE CLINICS.

At the present time, there are 18 Maternity and Child Welfare Centres operating in the city. The three main Centres are :—the Central Clinic, Orchard Place ; the Firth Park Centre, North Quadrant ; and the Manor Centre, Ridgeway Road. The remaining 15 Centres are improvised premises, nine of which are in Church buildings, two are accommodated in the City Libraries at Hillsborough and Walkley, two share premises with Nursing Associations, one is in rooms rented from a Co-operative Society, and the remaining clinic is a house, belonging to the Corporation, which has been adapted for clinic purposes.

As the need arises for additional clinics, premises are sought and arrangements made to provide the necessary service. The last two Centres, which were opened on the 31st January, 1949, provide for the Greenhill district and the congested district of Darnall, respectively.

The days and times of opening are as follows :—

Centre	Clinic Days and Times	Services provided
Orchard Place	Daily 9 a.m. and 1.30 p.m. (except Saturday afternoon)	Infant and Orthopædic Consultations. Minor Ailments and Ear clinics. Sunray and Massage clinics. Diphtheria Immunisation sessions. Ante-natal, post-natal and Birth Control clinics.
Firth Park	Do.	Infant Consultations. Medical Inspection of pre-school children. Minor Ailments and Ear clinics. Sunray clinic. Diphtheria Immunisation sessions. Ante-natal and post-natal clinics.

Centre	Clinic Days and Times	Services provided
Manor	Daily 9 a.m. and 1.30 p.m. (except Saturday afternoon).	Infant Consultations. Medical Inspection of pre-school children. Minor Ailments and Ear clinics. Sunray clinic. Diphtheria Immunisation sessions. Ante-natal and post-natal clinics.
Hillsborough	Monday 2 p.m. Tuesday } Thursday } 9.30 a.m. and 2 p.m.	Infant Consultations, Diphtheria Immunisation sessions, and Ante-natal clinic.
Carbrook	Monday 9.30 a.m. Wednesday 9.30 a.m. and 2 p.m. Friday 9.30 a.m.	Do.
Abbeydale	Monday } Wednesday } 9.30 a.m. and 2 p.m. Friday }	Do.
Woodhouse	Tuesday } Thursday } 2 p.m.	Do.
Tinsley	Tuesday 2 p.m.	Do.
Walkley	Monday 2 p.m. Wednesday 9.30 a.m. and 2 p.m. Friday 2 p.m.	Infant Consultations, and Diphtheria Immunisation sessions.
Handsworth	Tuesday } Friday } 2 p.m.	Do.
Chantrey	Wednesday 9.30 a.m. and 2 p.m.	Do.
Totley	Thursday 2 p.m.	Do.
Broomhill	Thursday 9.30 a.m. and 2 p.m.	Do.
Endcliffe	Tuesday 9.30 a.m. and 2 p.m. Friday 2 p.m.	Do.
Wordsworth Drive	Monday 9.30 a.m. Wednesday 9.30 a.m. and 2 p.m.	Do.
Dore	Thursday 9.30 a.m. (alternate weeks)	Do.
Greenhill	Monday 9.30 a.m. and 2 p.m.	Do.
Darnall	Monday } Friday } 2 p.m.	Do.

Infant consultations are held whenever the clinics are open, except on Saturday mornings ; diphtheria immunisation is also carried out whenever the clinics are open, including Saturday mornings. Sessions for the other services are held on appropriate days and times.

At the infant clinics, every baby is seen by the doctor on the first attendance. At several of the centres there is a doctor in attendance at the ante-natal session and a health visitor at the infant session, and the health visitor refers to the doctor all babies attending for the first time and any who are not making satisfactory progress. The other children attending the health visitor's session are seen by the doctor periodically.

At the centres where there is no ante-natal session, a doctor is in attendance for the supervision of the babies.

**Medical Inspection Clinic.**—At Firth Park and Manor Centres, the medical inspection clinic has proved a great asset to child welfare work. A record is kept of all children who have attended the clinic and, as near as possible to the child's second, third and fourth birthdays, and again between 4½ and 5 years of age, the mother is invited to attend with the child for full medical examination. The attendances for medical examination during the year were 1,391 at Firth Park Centre and 1,629 at Manor Centre.

This service is being commenced at several other clinics, and will eventually be available at all Maternity and Child Welfare Centres.

**Attendances at Infant Welfare Clinics.**—During the year 1949, 144,100 attendances were made at the Infant Welfare Clinics (exclusive of 9,858 attendances at the diphtheria immunisation clinic). 98,562 of these were made at Infant Consultations, and 41,927 at the Minor Ailments and Ultra-Violet Light Clinics. The total also includes 1,496 attendances at sessions of the



orthopædic consultation clinics, and 2,115 at orthopædic treatment clinics held each week at Orchard Place Centre by Dr. C. Lee Pattison, Orthopædic Specialist and Medical Superintendent, King Edward VII Hospital, who is in the service of the Sheffield Regional Hospital Board. Details of the attendances at Infant Welfare Clinics are given below.

**Infant Consultations.**—Particulars follow of the attendances at the Infant Consultations which were held at the various clinics in the year 1949 :—

ATTENDANCES AT INFANT CONSULTATIONS.

Centre.	Infant Consultations.		Total Attendances	Number of Sessions	Average Attendance per Session
	Under 1 yr.	1 to 5 yrs. and over			
Orchard Place .. ..	9,494	3,084	12,578	584	22
Firth Park .. ..	14,028	6,988	21,016	786	27
Manor .. ..	9,554	6,369	15,923	638	25
Woodhouse .. ..	1,461	406	1,867	99	19
Handsworth .. ..	1,671	291	1,962	101	19
Carbrook .. ..	4,023	591	4,614	205	23
Abbeydale .. ..	5,740	2,554	8,294	318	26
Walkley .. ..	3,632	1,151	4,783	202	24
Hillsborough .. ..	5,687	1,755	7,442	284	26
Chantrey Road .. ..	2,206	805	3,011	111	27
Totley .. ..	818	320	1,138	51	22
Endcliffe .. ..	3,207	1,023	4,230	148	29
Broomhill .. ..	2,402	912	3,314	104	32
Tinsley .. ..	1,066	193	1,259	73	17
Wordsworth Drive .. ..	2,602	422	3,024	151	20
Dore .. ..	215	123	338	26	13
*Darnall .. ..	2,342	233	2,575	91	28
*Greenhill .. ..	886	308	1,194	88	14
<b>TOTALS .. ..</b>	<b>71,034</b>	<b>27,528</b>	<b>98,562</b>	<b>4,060</b>	<b>24.3</b>

\* New Centres opened 31-1-49.

**New Cases attending Infant Consultations.**—6,173 new cases attended during the year 1949 at the Infant Consultations, as shown below. The 356 new cases attending the Orthopædic Consultations Clinics, as shown in the next succeeding statement, are not included in these figures, since the great majority are cases transferred from Infant Consultations.

NEW CASES ATTENDING INFANT CONSULTATIONS.

Centre.					Under 1 yr.		Over 1 yr.			Totals.
Orchard Place .. ..	..	..	..	..	1,225	..	107	..	..	1,332
Firth Park .. ..	..	..	..	..	1,053	..	53	..	..	1,106
Manor .. ..	..	..	..	..	828	..	38	..	..	866
Woodhouse .. ..	..	..	..	..	107	..	5	..	..	112
Handsworth .. ..	..	..	..	..	110	..	5	..	..	115
Carbrook .. ..	..	..	..	..	374	..	2	..	..	376
Abbeydale .. ..	..	..	..	..	410	..	15	..	..	425
Walkley .. ..	..	..	..	..	228	..	6	..	..	234
Hillsborough .. ..	..	..	..	..	474	..	24	..	..	498
Chantrey Road .. ..	..	..	..	..	130	..	2	..	..	132
Totley .. ..	..	..	..	..	53	..	1	..	..	54
Endcliffe .. ..	..	..	..	..	196	..	17	..	..	213
Broomhill .. ..	..	..	..	..	147	..	11	..	..	158
Tinsley .. ..	..	..	..	..	68	..	2	..	..	70
Wordsworth Drive .. ..	..	..	..	..	188	..	4	..	..	192
Dore .. ..	..	..	..	..	18	..	1	..	..	19
*Darnall .. ..	..	..	..	..	183	..	3	..	..	186
*Greenhill .. ..	..	..	..	..	79	..	6	..	..	85
<b>TOTALS .. ..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>5,871</b>	<b>..</b>	<b>302</b>	<b>..</b>	<b>..</b>	<b>6,173</b>

\* These Clinics were opened 31-1-49.

**Orthopædic Consultation Clinics.**—Dr. C. Lee Pattison held 76 consultation sessions for orthopædic cases at the Orchard Place Centre during the year. Patients made 1,496 attendances at these consultations. The statement below is furnished by Dr. Pattison, through the medium of the Sheffield Regional Hospital Board.

356 new patients attended and these are classified as follows :—

Rickets (including two acute cases)	..	..	..	..	..	170
Anterior Poliomyelitis	..	..	..	..	..	43
Foot Strain	..	..	..	..	..	35
Other Postural conditions	..	..	..	..	..	21
Sternomastoid tumours and torticollis	..	..	..	..	..	36
Congenital talipes	..	..	..	..	..	15
Cerebral Spastic paralysis	..	..	..	..	..	5
Congenital deformity of toes	..	..	..	..	..	7
Congenital dislocation of hip	..	..	..	..	..	2
Other congenital deformities	..	..	..	..	..	12
Unclassified	..	..	..	..	..	10
TOTAL	..	..	..	..	..	356

In addition to the above, the attendances of Dr. C. Lee Pattison’s patients at the Orthopædic Treatment Clinics at Orchard Place totalled 2,115.

Infant Welfare Centres have proved to be of great value in the prevention of deformities. Mothers attend with their children at an early age and, where signs of orthopædic defects, such as torticollis, talipes equino varus, etc., are detected, the child is referred immediately to Dr. C. Lee Pattison’s clinic for orthopædic cases, which is held at Orchard Place every Tuesday afternoon. The child then receives treatment for the defect and is also kept under supervision at the Infant Clinic for advice with regard to feeding and general hygiene.

**Attendances at Minor Ailments and Ultra-Violet Light Clinics.**—At the Minor Ailments Clinic at Orchard Place, 777 children received treatment and made 2,449 attendances ; at Firth Park, 684 children received treatment, making a total of 2,109 attendances, and, at Manor Centre, 576 children received treatment, making a total of 1,648 attendances. Details with regard to these clinics appear below :—

ATTENDANCES AT MINOR AILMENTS AND ULTRA-VIOLET LIGHT CLINICS.							
Centre.			Minor Ailments Clinic		Ultra-Violet Light Clinic.		Totals.
			Under 1 yr.	1 to 5 yrs. and over.	Under 1 yr.	1 to 5 yrs. and over.	
Orchard Place	..	..	1,598	851	72	19,335	21,856
Firth Park	..	..	1,628	481	26	7,927	10,062
Manor	..	..	1,223	425	89	8,272	10,009
TOTALS	..	..	4,449	1,757	187	35,534	41,927

Particulars follow of the total attendances of all cases and also of the number of new cases which attended in each of the past five years at all consultation and treatment clinics :—

Year.	Total Attendances of all children.	Total Children attending for first time.
1945 .. .. .	135,647	5,956
1946 .. .. .	140,720	7,283
1947 .. .. .	152,485	8,067
1948 .. .. .	161,233	6,924
1949 .. .. .	144,100	6,173

**Children referred for Hospital Treatment.**—1,380 of the children who attended at the Centres during the year were referred by the Medical staff for treatment at the various hospitals.

**Dried Milk and Other Foods.**—At Orchard Place Centre (and subsidiary Centres), there were 111,139 lbs. of dried milk and other foods distributed during the year, as compared with 169,505 lbs. in 1948. At Firth Park Centre, in addition, there were 26,627 lbs. distributed, as against 31,935 lbs. in 1948, and 21,818 lbs. were distributed from Manor Centre, as compared with 37,087 lbs. in 1948.



**National Dried Milk and Vitamins.**—In addition to the usual distribution of dried milk and other foods at the Maternity and Child Welfare Centres, there are quantities of National Dried Milk and Vitamins distributed at these Centres on behalf of the Ministry of Food. The following are details in regard to the distribution of these commodities in the year 1948 and 1949 :—

Foods	Quantities Distributed—Years.	
	1948.	1949.
National Dried Milk—1½ lb. tins (No. of tins).	116,911	115,943
Cod Liver Oil—6 oz. bottles (No. of bottles).	134,805	121,960
Orange Juice—6 oz. bottles (No. of bottles).	425,554	375,991
Vitamin A and D Tablets—Pkts. of 45 tablets (No. of pkts.).	28,430	24,910

#### MATERNITY AND NURSING HOMES.

There were no new premises registered as Nursing Homes during the year. On the 31st December, 1949, there were 13 Nursing Homes on the register, providing accommodation for 26 maternity and 120 other cases, and these premises were visited as required.

#### HOMES FOR MOTHERS AND BABIES AND HOMELESS CHILDREN.

St. Agatha's Church of England Hostel, a home for unmarried expectant mothers, is situated at No. 22, Broomgrove Road and has a complement of 28 beds. After the confinements, which take place in hospital, the mothers return to the Home with their babies until the necessary arrangements can be made for the care of the baby and for the mother to resume work.

The Salvation Army Home, at Kenwood Park Road, admits various classes of cases, including homeless children and girls who are lacking adequate control. The Sheffield Branch of Dr. Barnardo's Home also accepts homeless children.

Unmarried expectant mothers are, where necessary, admitted to Firvale Infirmary which has been administered by the Sheffield Regional Hospital Board since 5th July, 1948, and homeless children are admitted into the Sheffield Children's Homes administered by the Council.

A scheme is under contemplation for the provision of a Mother and Baby Home, to be administered by the Council, in premises in Hucklow Road.

DAY NURSERIES.

Little change has occurred since 1948 in the facilities for caring for children in the 17 Day Nurseries. The accommodation for a total of 705 children remained the same.

The average monthly attendances (Monday to Friday inclusive) are shown in the statement below. The greater number of absences due to ill health occurred during the early spring. The greatest freedom from illness was during the summer, but, at this period, holidays of parents and older brothers and sisters accounted for absence.

Month								Total average daily attendances
January .. .. .	..	..	..	..	..	..	..	704
February .. .. .	..	..	..	..	..	..	..	751
March .. .. .	..	..	..	..	..	..	..	781
April .. .. .	..	..	..	..	..	..	..	846
May .. .. .	..	..	..	..	..	..	..	883
June .. .. .	..	..	..	..	..	..	..	862
July .. .. .	..	..	..	..	..	..	..	764
August .. .. .	..	..	..	..	..	..	..	785
September .. .. .	..	..	..	..	..	..	..	824
October .. .. .	..	..	..	..	..	..	..	831
November .. .. .	..	..	..	..	..	..	..	799
December .. .. .	..	..	..	..	..	..	..	760

Few mothers were at work on Saturday mornings, but the nurseries, remaining open, enabled the staff to do work which could not be attempted on other days.

The opportunity was also taken on Saturdays by the Matrons to give instruction in child care to parties of Girl Guides and members of other youth organisations.

Pressure on the nurseries, for admission of the children of mothers wishing to take up employment, continued to be heavy. Priority of admission was given to the children of mothers who were to be admitted to hospital for confinement or illness, and to the children of mothers who must work for financial reasons, being widowed, unmarried or deserted.

Normally the day nurseries are for the accommodation of children between the ages of one and five years. Children under the age of 12 months are occasionally admitted because of some urgent necessity, but this is avoided whenever possible, because young children in groups are very liable to contract infection and this may lead to the exclusion of the child from the nursery and the recall of the mother from work, besides disorganising the work of the nursery.

Children are medically examined as soon as possible after admission to the nurseries, and thereafter about every six weeks. Examinations for any special reasons at other times are made at the Infant Welfare Centres. Careful enquiry is made into the cause of absence of children from the nursery, and appropriate action taken where infectious disease is concerned. All the children are immunised against diphtheria. Cod liver oil, orange juice and, where necessary, iron tonic, are given to the children; in addition, there are two-thirds of a pint of milk available for each child every day.

The use of detergents and sterilising agents for dishwashing, after being proved to be highly effective in freeing crockery from living bacteria, was extended to all nurseries. These products are constantly being improved upon and investigations are being carried out to ensure that the most appropriate ones are used in the nurseries.

During 1949, there was unusually little spread of infectious disease amongst the nursery children.

Attention is paid to the health of the staff. A medical examination is made upon appointment and there is an annual chest examination by the mass miniature apparatus of all nursery staffs. Careful attention is paid to any period of sickness, so as to avoid infectious disease being brought into the nursery by the staff.

Applications were invited from amongst the Nursery Assistants for admission to the two year course of training as Nursery Nurses. This course has been arranged in association with the Education Committee, and prepares candidates for the qualifying examination of the National Nursery Examination Board. Students spend two whole days per week, during six terms, at



the Nursery Training Centre, Clifford Road. The remainder of the instruction is of a practical nature in specially approved day nurseries and nursery schools. The day nurseries approved for the training during 1949 were : Beet Street, Parson Cross, Carbrook, Royal Infirmary, Meersbrook Park, Cricket Inn Road, Abbeyfield Park and Langsett Road.

Instruction in the nursery is given by the Matron. Teaching at the Nursery Training Centre is carried out by members of the staffs of the Education and Public Health Departments. A Supervisory Matron of the nurseries was appointed as a teacher of the nursery students and to extend supervision over all the day nurseries. Five assistants from the day nurseries were selected by examination to take the course and are making good progress.

Particulars are given below of the dates of opening of each of the 17 day nurseries and of the accommodation and the daily average number of children maintained in each nursery during 1949.

Nursery			Date of opening	Accommodation (Number of children)	Daily average number of children maintained during 1949
Abbeyfield Park	..	..	1-4-43	40	44
Attercliffe	..	..	4-8-42	40	46
Beet Street	..	..	1-4-42	45	41
Broadfield Road	..	..	1-10-42	40	41
Carbrook	..	..	21-9-42	40	44
Craddock Road	..	..	14-12-42	40	48
Cricket Inn Road	..	..	17-2-43	40	45
Darnall	..	..	17-8-42	40	42
Firth Park	..	..	18-11-42	40	49
Hillsborough	..	..	31-8-42	40	46
Langsett Road	..	..	26-6-43	50	62
Meersbrook Park	..	..	28-1-43	40	58
Moore Street	..	..	30-11-42	40	48
Parson Cross	..	..	29-6-42	40	44
Prince of Wales Road	..	..	19-1-43	40	49
Royal Infirmary	..	..	12-11-42	40	50
Swinton Street	..	..	9-9-43	50	45

DENTAL SERVICES

REPORT OF MR. J. WALTER SHAW, H.D.D., L.D.S.R.C.S. (Edin.),  
SENIOR SCHOOL DENTAL SURGEON,  
on the Dental Treatment provided in the School Health Service Dental Clinics, for Pre-School Children, Ante-Natal and Nursing Mother Patients and Others, during 1949.

Pre-School Children.

These children, in a comprehensive scheme of dental treatment, should be dentally inspected every three months after the age of two years, and any treatment required provided. This treatment should include conservative treatment, where needed to preserve the deciduous dentition in order to aid the proper development of the child. Early loss of deciduous teeth leads, in many cases, to collapse of the dental arches, later necessitating prolonged orthodontic treatment. Loss of efficient mastication too, due to septic carious deciduous teeth or loss of these teeth, leads to further caries due to stagnation of food particles around the teeth present in the mouth. Gingivitis is also caused, aggravating the condition. It is felt that the ingestion of food after being masticated in a septic environment cannot but be harmful to the developing child.

Owing to the shortage of dental surgeons in the Local Authority's Service, it is impossible to provide this comprehensive dental treatment which is required for these essentially priority classes. During the year 1949, apart from children under five who attended the Education Committee Nursery Classes, 283 children of the pre-school age group were given dental treatment at the school clinics. They made 359 attendances for treatment. The statement below shows the treatment provided.

No. of Children	Attendances	Extractions	Gas and Oxygen Anæsthetics	Fillings	Other Treatment
283	359	582	335	14	11

Since the commencement of the National Health Service, the number of pre-school children attending the clinics for emergency dental treatment has increased. These figures show the increase :—

Year	No. of children				Attendances	
1947	..	..	..	..	97	111
1948	..	..	..	..	177	189
1949	..	..	..	..	283	359

This increase may be due to a greater general consciousness of the benefits of dental treatment, or it may be due to the difficulty in arranging appointments with general dental practitioners—or both.

Mental Welfare.

Two uneducable children were given dental treatment by extraction under nitrous oxide and oxygen anæsthetic after pre-medication.

Three pupils attending the Occupation Centre were treated dentally during the year for relief of toothache and oral sepsis.

Ante-Natal Cases and Nursing Mothers.

In an attempt to implement the National Health Service Act, 1946, there was agreement by the Committee that the ante-natal patients and nursing mothers should have dental treatment provided by the dental surgeons of the School Health Staff.

Shortage of dental surgeons precluded the inspection and treatment of every expectant mother, and it was agreed that up to ten per cent of the time available should be devoted to the inspection and treatment of these cases. This figure of ten per cent is general throughout the country.

In order not to spend time inspecting more patients than could be offered treatment, it was decided to offer inspection and treatment in the first place to those who requested it and were



found by the examining doctor to have a generally good mouth. In this way good mouths could be kept sound and the caries in the teeth treated by fillings where possible. The gums could be kept sound and free from sepsis by scaling and gum treatment, and partial dentures provided to restore an efficient masticating surface where necessary.

Other patients whose mouths were really septic were to be given an appointment for dental inspection and treatment. The number offered inspection appointments was not to exceed thirty per week until the "load" of treatment required and accepted could be ascertained.

The patients, after inspection, were to be told whether in the opinion of the inspecting dental surgeon they required dental treatment. They were then at liberty to accept the offer of treatment in the School Health Service dental clinics or they could obtain it privately. If they accepted the offer of treatment in the clinics, details were to be given of the treatment considered necessary to remove and prevent further sepsis during pregnancy.

This scheme was commenced in October, 1949, and the following statement gives details of the numbers inspected.

No. of inspection cards sent to Welfare Centres	No. of cards issued by Welfare Clinics	No. of Patients attending for inspection at the dental clinics	No. found to require treatment	No. refusing treatment	No. stating they would obtain treatment privately
330	236	*177	176	9	3

\* Of those inspected, one case did not require treatment.

The details of dental treatment required in the mouths of those patients inspected are as follows :—

Fillings	Extractions	Dentures		Scalings	Scaling and Gum treatment	Other Treatment
		Partial	Full			
478	389	39	1	109	18	1

The treatment carried out during the period October to December, 1949, is detailed below.

Fillings	Extractions	Anæsthetics		Scalings	Dressings	X-rays	Miscellaneous
		Local or Regional	Nitrous Oxide and Oxygen				
111	217	52	21	49	27	10	18

In addition, one partial denture was fitted.

Forty patients had their treatment completed by the end of the year.

Of the 251 appointments made for treatment, 199 were kept, this being over 79 per cent., which may be considered quite favourable considering that these patients were pregnant.

#### Oral Hygienists.

A report on oral hygienists is included in the "Report of the Ministry of Health for the year ended 31st March, 1948." In this report it is stated that :—

"The introduction of a comprehensive dental service will make increasingly heavy demands on the dental profession. The Inter-Departmental Committee on Dentistry, under the Chairmanship of Lord Teviot, in considering how an adequate and satisfactory dental service for the population might be provided, recommended, *inter alia*, that—

1. A scheme for the training of dental hygienists should be initiated forthwith on such a scale as would provide an adequate test of their value.

2. The function of a dental hygienist should be limited to the scaling, cleaning and polishing of teeth and the instruction of patients in the technique of oral hygiene.

3. Her work should be conducted throughout under the responsible direction of a dentist, i.e.—

- (a) He should examine the patient before the work is carried out by the hygienist.
- (b) He should give direction as to the treatment to be carried out.
- (c) He should see the patient after this has been completed, and
- (d) He should be readily available throughout."

Oral hygienists have been employed in the United States of America for a number of years, and also by the Royal Air Force.

Oral hygienists are being trained by the Ministry of Health and, on successful completion of their course, are awarded the Certificate of Proficiency in Oral Hygiene.

In providing dental treatment, the unhealthy conditions which call for treatment fall into two main categories, to quote the above-mentioned report : " those in which tooth substance has been destroyed by caries (decay) and must be replaced by mechanical procedures, and those in which the soft tissues (gum) adjacent to the teeth are inflamed and in which the bony structure supporting the teeth is likely to be destroyed if the inflammatory condition is left untreated. In many of these cases the primary cause of inflammation of the gum—gingivitis—is the irritation by deposits of calculus or tartar around the necks of the teeth."

The services of an oral hygienist would be very beneficial in the treatment of these latter cases, by saving the dentists' time which could be devoted to the other forms of dental treatment, and so allowing more patients to receive the benefits of having a mouth free from sepsis.

The Medical Officer of Health and the Senior Dental Surgeon were invited by the Ministry of Health to inspect the arrangements for the training of the oral hygienists at the Eastman Dental Clinic in London, and were very impressed by the high standard of training and achievement.

The Education Committee is to be congratulated in agreeing to the employment of an oral hygienist, whose services would be a great aid in the treatment of the school children and the treatment of the expectant and nursing mothers. In almost one hundred per cent. of the mouths of the latter, scaling and cleaning and polishing of the teeth is an essential part of their dental treatment.

It is hoped that the services of an oral hygienist will be available in the early part of 1950.



## MIDWIFERY

At the end of the year 1949, in the Municipal Domiciliary Midwifery Service, there were 48 Midwives directly employed by the Council and two employed by the Jessop Hospital for Women, under arrangements with the Council.

The Midwives directly employed by the Council attended 2,394 confinements as Midwives and 1,167 as Maternity Nurses in the year 1949, the corresponding figures for the year 1948 being 3,050 and 1,004 respectively. The Midwives engaged by the Jessop Hospital for Women attended 100 cases during the year, all in the capacity of Midwife, as against 114 in 1948.

Patients applying for the services of Midwives to attend in the capacity of Midwife in the Municipal Midwifery Service are encouraged to remain under supervision at an ante-natal clinic at one of the Maternity and Child Welfare Centres. Midwives also attend the ante-natal clinics and so follow up their cases.

Where abnormalities necessitating hospital treatment arise during the ante-natal period, the engagement of the domiciliary midwife is cancelled and arrangements are made with the patient for her admission to the maternity section of either the City General Hospital or the Nether Edge Hospital.

The following statement gives particulars of the 4,295 engagements of Municipal Midwives in the year 1949 :—

	Engagements as				
	MIDWIFE		MATERNITY NURSE		TOTAL
Cases attended and nursed at home .. ..	2,338	..	1,156	..	3,494
Cases attended at home for confinement but transferred to hospital after delivery ..	56	..	11	..	67
Total cases delivered at home by Municipal Midwives .. .. .	2,394	..	1,167	..	3,561
Cases where midwife was in attendance ante-natally but patient was transferred to hospital before delivery .. ..	102	..	30	..	132
Cases delivered by private Midwives, subsequently attended by Municipal Midwives	2	..	—	..	2
Engagements cancelled—					
Patients admitted to hospital .. ..	396	..	61	..	457
For other reasons .. .. .	97	..	46	..	143
TOTAL of original engagements .. ..	2,991	..	1,304	..	4,295

The Midwives normally visit patients ante-natally and for fourteen days after delivery. During the year 1949, they made 11,687 visits to ante-natal patients and 65,911 visits to lying-in mothers. They also assisted at a total of 44 infant and ante-natal sessions at the Maternity and Child Welfare Centres during the year.

**Analgesia in Domiciliary Confinements.**—In the latter half of the year 1947, arrangements were made for the training of Municipal Midwives in the administration of Gas and Air Analgesia. The Midwives were withdrawn from the district in rotation to take this training in Hospital. The service commenced in November, 1947, and, by the end of 1948, all the Midwives directly engaged by the Council were qualified to administer Analgesics and had received sets of apparatus for this purpose. During 1949, Analgesics were administered by these Midwives in 956 cases, which compares with 539 in 1948. The Domiciliary Midwives of the Jessop Hospital for Women are also trained in the use of Analgesics.

**General Domiciliary Midwifery.**—At the end of the year 1949, there were 62 trained Midwives, inclusive of Municipal Midwives, in practice in Domiciliary Midwifery in the City. They consisted of 48 Municipal Midwives, 2 Midwives engaged by the Jessop Hospital for Women, 9 in private practice and 3 in the service of Nursing Associations.

There were 837 cases in which medical aid was summoned by Midwives during the year, under Section 14 (1) of the Midwives Act, 1918, as against 1,218 in 1948.



## HEALTH VISITING

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At the end of the year 1949, the staff of Health Visitors consisted of a Superintendent Health Visitor (also the non-medical Supervisor of Midwives), a Deputy Superintendent Health Visitor, two senior Health Visitors and 31 qualified Health Visitors. In addition there were two probationer Health Visitors, both of whom were State Registered Nurses and State Certified Midwives. These probationer Health Visitors remain on the staff for a period of from two to six months until arrangements can be made for their admission to a training school for Health Visitors. The probationer Health Visitors are mainly engaged on duties connected with the clinics, and obtain experience by visiting in the various districts in the company of the Health Visitors. On obtaining the Health Visitor's certificate, they return to the Department and are appointed on the staff of qualified Health Visitors.

The Health Visitors are required to undertake visiting for the purpose of general supervision in connection with the care of expectant and nursing mothers and young children, and, under the National Health Service Act, 1946, this function has been extended to include the general care and health education of the household as a whole. In this work their activities extend into the field of prevention of illness, and care and after-care for all members of the family.

Visits are also made to notified cases of puerperal pyrexia.

In connection with visits made to young children, the Health Visitors have access to the records of every Sheffield child shortly after birth, and the welfare of these children is supervised by means of regular visits from birth to the age of 5 years.

Where a case of ill health of a child is notified to the Medical Officer of Health, special visits are paid to the home and the child is kept under regular supervision until recovery.

Patients discharged from Hospitals are referred by the Hospital Authorities to the Department in order that they may be visited to ensure that the necessary after-care is provided.

This scheme has now been extended and, in the coming year, ten of the Health Visitors are to be personally attached to the City Hospitals and will be in constant touch with the Almoners, and together they are to discuss special circumstances relating to hospital patients, such as : the need for the services of a domestic help, housing and social conditions, diet, bedding, and any other matters which constitute a problem to the patient. These matters will then be referred to the appropriate section of the Department or other Authority, and the case followed up to ensure that, where possible, the patient is relieved of problems causing anxiety, and given every chance of complete recovery.

The Medical Superintendent of the City General Hospital reports to the Department all cases where a mother suffering from tuberculosis has her baby in the City General Hospital. This information is handed to the Health Visitor who has a knowledge of the patient and her home environment, and, as soon as the mother and baby return home, a visit is made and the case remains under special supervision. Where the child of a tuberculous mother is "boarded out", the Health Visitor supervises the progress of both mother and child in their respective homes.

The welfare of expectant mothers was very carefully supervised by two of the Health Visitors who were seconded for this duty. Patients who failed to keep their appointments at the ante-natal clinic were visited and a report submitted to the Senior Assistant Medical Officer for Maternity and Child Welfare. This, however, was not done if the case was to be attended for confinement by a general medical practitioner. Reports received at the Centre regarding the indisposition of an expectant mother, or any special circumstances arising connected with an ante-natal patient, were investigated by the Health Visitors. Patients were also visited post-natally.

It has, for many years, been the duty of Health Visitors to visit cases of pulmonary and other forms of tuberculosis. Prior to 5th July, 1948, this work was carried out in co-operation with the Tuberculosis Dispensary. Since the inauguration of the National Health Service, the visits to tuberculous patients have been continued in conjunction with the Care and After-Care



Service, working in co-operation with the Chest Clinic of the Sheffield Regional Hospital Board. In a number of cases, where there has been overcrowding in homes of tuberculous patients, reports have been made by the Health Visitors to the Care and After-Care Service, with the object of obtaining other accommodation for the family.

Complaints regarding overcrowding and unsatisfactory home conditions in which children are involved, and reports regarding neglect of children, are investigated by the Health Visitors, and such cases are kept under regular supervision. Part of this work is carried out in close co-operation with the National Society for the Prevention of Cruelty to Children.

The Health Visitors also give assistance to the School Medical Service by visiting cases of scabies and families in verminous condition, which are reported from time to time to the Medical Officer of Health.

All applications which do not conform with the usual requirements for admission to the Department's Nurseries are submitted to the Supervisory Matron of Nurseries, and the Health Visitor gives a report on the home circumstances and the need for the admission of the children to the Nurseries.

Visits are made by Health Visitors to the homes of applicants for the services of Domestic Helps who may be required in cases of general sickness as well as maternity cases. They also visit the homes of old people who need domestic help on account of old age and infirmity. This work has widened the scope of supervision in the home environment of people in all walks of life, especially those living in circumstances of unusual difficulty.

In addition to the above services, the Health Visitors attend clinics which are held for mothers and children at the eighteen Maternity and Child Welfare Centres. During the year 1949, they made an aggregate of 7,920 attendances at Infant, Ante-natal, Post-natal, and other clinics in the Maternity and Child Welfare Services, and at Nurseries.

During the year 1949 a total of 82,739 visits was paid by Health Visitors. A summary of these visits is given in the table which follows :—

**TABLE XII.**—*Summary of Visits of Health Visitors during the year 1949*

							Number of Visits.
Infants under 1 year—First Visits .. .. .	..	..	..	..	..	8,561	
Subsequent Visits .. .. .	..	..	..	..	..	14,845	
						<hr/>	23,406
Infants between 1 and 5 years of age .. .. .	..	..	..	..	..		39,958
*Nursed-out Children (Child Life Protection) .. .. .	..	..	..	..	..		55
Acute Rheumatism in Children .. .. .	..	..	..	..	..		114
Whooping Cough .. .. .	..	..	..	..	..		714
Scabies .. .. .	..	..	..	..	..		174
Ophthalmia Neonatorum .. .. .	..	..	..	..	..		51
Ex-Hospital Cases <i>re</i> After-Care .. .. .	..	..	..	..	..		162
Expectant Mothers—First Visits .. .. .	..	..	..	..	..	1,393	
Subsequent Visits .. .. .	..	..	..	..	..	2,855	
						<hr/>	4,248
Post-Natal Cases .. .. .	..	..	..	..	..		38
Puerperal Pyrexia .. .. .	..	..	..	..	..		128
Venereal Disease .. .. .	..	..	..	..	..		114
Midwives .. .. .	..	..	..	..	..		209
Tuberculosis—Pulmonary .. .. .	..	..	..	..	..	4,487	
Surgical .. .. .	..	..	..	..	..	611	
Separate Bed Enquiries .. .. .	..	..	..	..	..	461	
						<hr/>	5,559
School Complaints .. .. .	..	..	..	..	..		12
Houses Let-in-Lodgings .. .. .	..	..	..	..	..		3
<i>Re</i> Cleanliness of Houses .. .. .	..	..	..	..	..		157
Diphtheria Immunisation Visits .. .. .	..	..	..	..	..		3,822
Domestic Help Service .. .. .	..	..	..	..	..		276
Visits in regard to :—							
Investigation of Infant and Maternal Deaths .. .. .	..	..	..	..	..	}	3,539
Cases referred by Hospital Almoner .. .. .	..	..	..	..	..		
Unsatisfactory Homes and neglected Children .. .. .	..	..	..	..	..		
General Prevention of Illness .. .. .	..	..	..	..	..		
Various other Visits .. .. .	..	..	..	..	..		
						<hr/>	82,739

\* These visits were paid on behalf of the Children's Department, to which the function of Child Life Protection is transferred.

**Care of Illegitimate Children.**—The special care of illegitimate children was the responsibility of one of the staff of Health Visitors who had been seconded for these duties. The first visit to each illegitimate child was paid by this Visitor. Where the baby and the home conditions were satisfactory, the supervision was taken over by the Health Visitor of the district in which the child lived, but unsatisfactory cases remained under the care of the Special Visitor. During the period 1st January to 5th October, 1949, a total of 272 visits were made by this Visitor. This officer resigned in October, and the work is now carried out by the Health Visitors in their areas.

Unmarried expectant mothers attending the Maternity and Child Welfare Centre were interviewed at the Centre, and, in certain cases, the homes were also visited by the Special Visitor, who made 15 such visits from 1st January to 5th October, 1949. These cases were followed up in order to supervise the welfare of the mother and child. This duty also is now in the hands of the Health Visitors in their areas.

**Acute Rheumatism in Children.**—Until the resignation of the Special Visitor in October, the supervision of cases of acute rheumatism in children was part of her duty. She acted as liaison officer between the patient and the Children's Hospital, and followed up each case with a home visit to ascertain the social condition of the family. During 1949, there were 114 visits paid to the homes of rheumatism cases by this Visitor. Since her resignation, the work has been carried out by the Deputy Superintendent Health Visitor.

**Ophthalmia Neonatorum.**—There were 9 notifications of Ophthalmia Neonatorum during the year 1949, and it is gratifying to report that the vision was unimpaired in all cases following the treatment given. The Health Visitors paid 51 visits to these cases.

The following statement gives particulars of cases of Ophthalmia Neonatorum during the past 36 years :—

OPHTHALMIA NEONATORUM DURING 36 YEARS : 1914 TO 1949.

Year	Total Cases	No. who died from other causes during attack	No. who died from Ophthalmia Neonatorum	No. with eyes not perfectly recovered	No. who were blind in one eye	No. who were blind in both eyes	No. where result was not ascertained
1914	221	5	—	7	2	—	4
1915	189	3	—	2	2	1	2
1916	254	4	1	3	—	—	5
1917	297	9	6	2	3	1	6
1918	247	9	1	2	—	—	4
1919	218	4	—	—	—	—	6
1920	302	11	—	3	2	1	—
1921	253	7	1	2	2	—	8
1922	239	6	1	1	—	—	3
1923	228	7	—	—	4	—	—
1924	210	1	1	2	—	—	1
1925	213	3	2	3	—	—	4
1926	136	3	—	1	—	—	3
1927	113	7	—	1	1	—	4
1928	122	2	—	1	—	—	5
1929	64	2	—	—	—	—	2
1930	51	1	—	—	1	—	2
1931	41	3	—	—	—	—	—
1932	34	2	—	—	—	—	—
1933	36	1	—	3	—	—	—
1934	26	—	—	—	—	—	—
1935	32	—	—	—	—	—	—
1936	26	—	—	—	—	—	—
* 1937	32	1	—	—	—	—	—

\* Information relating to the years 1938 to 1949 appears on the next page.



Cases of Ophthalmia Neonatorum have occurred during the past twelve years as follows :— 1938 (25), 1939 (32), 1940 (17), 1941 (19), 1942 (15), 1943 (14), 1944 (11), 1945 (14), 1946 (12), 1947 (26), 1948 (11), 1949 (9). In none of these cases did complications of any kind appear.

The preceding statements show that, since 1st April, 1914, when Ophthalmia Neonatorum became compulsorily notifiable by medical practitioners, great strides have been made in the prevention and treatment of this disease. In 1914, there were 221 notifications and, of these, five babies died during the illness, and nine had damage to the eyes. During the 20 years, 1914 to 1933 inclusive, there were 3,468 notifications (an average of 173 cases per year) and 53 of these cases resulted in damage to the eyes. In the following 16 years, from 1934 to 1949 inclusive, there were 321 notified cases, an average of 20 per year, and during this period there was no damage to the eyes following treatment given in any case.

This improvement is mainly attributed to the intensive ante-natal supervision and in addition, in later years, to the use of sulphonamide and penicillin treatments.

It is gratifying to note that the decrease in Ophthalmia Neonatorum has been progressive, the year's total being the lowest on record : namely, nine cases, as against 221 in 1914, and 302 in 1920, which was the highest number of cases in any one year.

**Care of Premature Infants.**—With a view to obtaining immediate information regarding premature babies born in the City, the weight of the baby at birth is reported on the notification of birth form, and the information is passed on to the Health Visitors so that special attention may be given.

In addition, where a Municipal Midwife is attending at a premature birth, she continues visiting beyond the usual period of 14 days.

When premature babies are discharged from Hospital, frequent visits are made by a Health Visitor to ensure that the child receives proper care and attention.

Information is given in the statement below regarding the 498 premature babies born in 1949 to mothers who were resident in the City.

	Born at Home				Born in Hospital or Nursing Home
Died in first 24 hours .. .. .	..	..	..	14	44
Died on 2nd to 7th day .. .. .	..	..	..	12	32
Died on 8th to 28th day .. .. .	..	..	..	2	6
Survived 28 days .. .. .	..	..	..	139	249
				<u>*167</u>	<u>331</u>

\* Of the 167 babies born at home, 147 were nursed entirely at home and 20 were transferred to Hospital.

Of the 20 transferred to Hospital, 2 died during the first 24 hours, 5 died on the 2nd to 7th day, and 13 survived 28 days.

## HOME NURSING

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The arrangements of the City Council for the provision of a Home Nursing Service, as required by the National Health Service Act, 1946, came into operation on 5th July, 1948. On this date, the whole of the nursing staff of the Sheffield Queen Victoria District Nursing Association, which for many years had provided a domiciliary nursing service in the City, was brought into the service of the Council and became part of the staff of the Public Health Department. The nursing service which was administered by the Woodhouse District Nursing Association also came under the direct administration of the Council.

There are two principal Nurses' Homes, these being the Johnson Memorial Home and the Princess Mary Nurses' Home, from which the nurses employed by the Council operate ; there are subsidiary homes in the Handsworth, Manor and Woodhouse areas.

In addition, arrangements were made with the Intake, Gleadless and Hollinsend Nursing Association, the Darnall and District Medical Aid Society and the Tinsley and District Nursing Association to provide home nursing on an agency basis. The Home Nursing Service of the City, constituted as described in these paragraphs, was co-ordinated with the other health services of the City.

On 28th February, 1949, the Tinsley and District Nursing Association ceased to operate as an agent of the Council, as also did the Darnall and District Medical Aid Society on 31st March, 1950, and arrangements were made for the necessary service to be provided for these areas.

At the end of the year 1949 there were 58 District Nurses—34 full-time and 24 part-time—directly employed by the Council and six employed by the voluntary organisations acting as agents of the Council. All these nurses are specially qualified in the nursing of patients in their own homes, in addition to being State Registered Nurses, and the majority are also qualified midwives. All necessary advice and attention is thus available to persons who are nursed or confined at home.

The work carried out by the nurses during the year 1949, is summarised as follows :—

Number of cases of notifiable and other diseases attended by the District Nurses :—

Under five years of age	..	..	..	..	80	
Aged five to fifteen years	..	..	..	..	61	
Aged fifteen years or over	..	..	..	..	4,641	
						4,782

Number of new cases added to the Register in the period :—

Referred by Medical Practitioners	..	..	..	..	2,899	
Referred by Hospitals	..	..	..	..	502	
Personal application at Nurses' Homes	..	..			439	
Referred from Maternity and Child Welfare Centres					104	
Personal application at Home Nursing Centre	..				37	
Referred by Social Workers	..	..	..	..	7	
						3,988

Classification of new cases :—

Medical	..	..	..	..	..	2,983
Surgical	..	..	..	..	..	745
Gynæcological	..	..	..	..	..	103
Maternity	..	..	..	..	..	157
						3,988

Number of cases removed from the Register in the period :—

Convalescent	..	..	..	..	..	1,780
Admitted to Hospital	..	..	..	..		645
Died	..	..	..	..	..	825
Removed for other reasons	..	..	..	..		671
						3,921

The nurses made an aggregate of 138,357 visits during the year. These were for a great variety of forms of illness. They included :—11,941 visits to cases of Cancer, 2,276 to cases of Pneumonia and 2,534 to cases of Tuberculosis. On the average, each nurse attended a total of 89 cases during the year, with an average of 2,306 visits.



## VACCINATION AND IMMUNISATION

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On 5th July, 1948, the Appointed Day under the National Health Service Act, 1946, the Vaccination Acts ceased to have effect and the compulsory vaccination of infants against Smallpox and the functions of Public Vaccinators came to an end. Under the new Act the City Council has the duty of making arrangements with medical practitioners to provide free vaccination against Smallpox and also free immunisation against Diphtheria for all Sheffield residents who desire these services. In these arrangements an opportunity has been given to all practitioners providing general medical services under Part IV of the Act to provide, in addition, the services of vaccination and immunisation to persons on their lists. Facilities are also available for vaccination and immunisation at Maternity and Child Welfare Centres, at Nurseries and at School Clinics. The practitioner obtains the vaccine lymph and Diphtheria prophylactic from a central store which has been established at the Laboratory at the City General Hospital.

In every case in which a medical practitioner undertakes vaccination or immunisation, he is asked to complete and send to the Medical Officer of Health a record card giving all the details which are necessary to maintain accurate records.

Separate Reports follow with regard to the services of Vaccination and Immunisation :—

### VACCINATION.

Information is given in the statement below relating to primary vaccination and revaccination in 1949, and also, for purposes of comparison, in the period from 5th July to 31st December, 1948, the preceding months of 1948, and in the full year 1947.

#### VACCINATION AND REVACCINATION—YEARS 1947-1949.

Year.			Aged under 1 yr.	1 and under 5 yrs.	5 yrs. and under 15 yrs.	15 yrs. and over	Total
PERSONS VACCINATED							
1947	..	..	..	..	..	..	5,259
1948	(1st January to 4th July)	..	569	1,632	10	3	2,214
*1948	(5th July to 31st December)	..	747	36	12	26	821
*1949	..	..	..	..	..	..	1,269
PERSONS REVACCINATED							
1947	..	..	..	..	..	..	—
1948	(1st January to 4th July)	..	—	—	—	—	—
*1948	(5th July to 31st December)	..	—	1	2	59	62
*1949	..	..	..	..	..	..	253

\* As regards these periods the age quoted is that at 31st December. In previous periods it is the age when vaccinated.

It will be seen that in the first period after the introduction of voluntary vaccination there was a very marked decline in the number of primary vaccinations. In fact the average number of persons vaccinated per month in this period fell to 32 per cent. of the monthly average for the year 1947.

One should bear in mind that infant vaccination does more than provide young children with immunity against Smallpox, which can be expected to last at least until the age of beginning school; it also ensures that the vaccination, performed perhaps as an emergency measure or as a routine procedure required by reason of service in the forces or by travel to a country where Smallpox is prevalent, will be less likely to cause a severe local reaction resulting in temporary disability, or to be followed by encephalomyelitis, which is a rare but serious complication.

The Ministry of Health Memorandum on vaccination against Smallpox, issued in 1948, recommends the “multiple pressure technique” of introducing the vaccinia virus into the deeper

layers of the epidermis. The operation is almost painless and severe local reactions are less likely than with the previous methods. The technique consists of pressing the side of the needle point about 30 times into the area of skin covered by the drop of lymph.

## DIPHTHERIA IMMUNISATION.

An efficient Diphtheria Immunisation service was already in existence in Sheffield and it was not greatly changed by the introduction of the National Health Service Act, 1946.

A total of 9,230 children under 15 years of age completed the course of immunisation in the year 1949, as against 9,328 in 1948. The following statement gives particulars of the number of persons who have been immunised since 1937, the first year in regard to which there are records available :—

						Number of persons who completed the course.		
Year.						Aged under 5 yrs.	5 yrs. and under 15 yrs.	15 yrs. and over.
1937-40	..	..	..	..	..	347	241	—
1941	..	..	..	..	..	4,335	5,530	76
1942	..	..	..	..	..	8,995	22,145	257
1943	..	..	..	..	..	6,965	14,461	626
1944	..	..	..	..	..	5,489	2,669	51
1945	..	..	..	..	..	7,213	1,881	27
1946	..	..	..	..	..	7,717	1,660	16
1947	..	..	..	..	..	8,133	1,408	39
1948	..	..	..	..	..	8,511	817	10
1949	..	..	..	..	..	7,655	1,575	49
TOTALS						65,360	52,387	1,151

It will be appreciated that within these age groups there is a considerable movement year by year owing to children attaining to a higher age group. After adjustment for this circumstance the records show the number of persons in the various age groups who had been immunised up to 31st December, 1949, to be as in the statement below :—

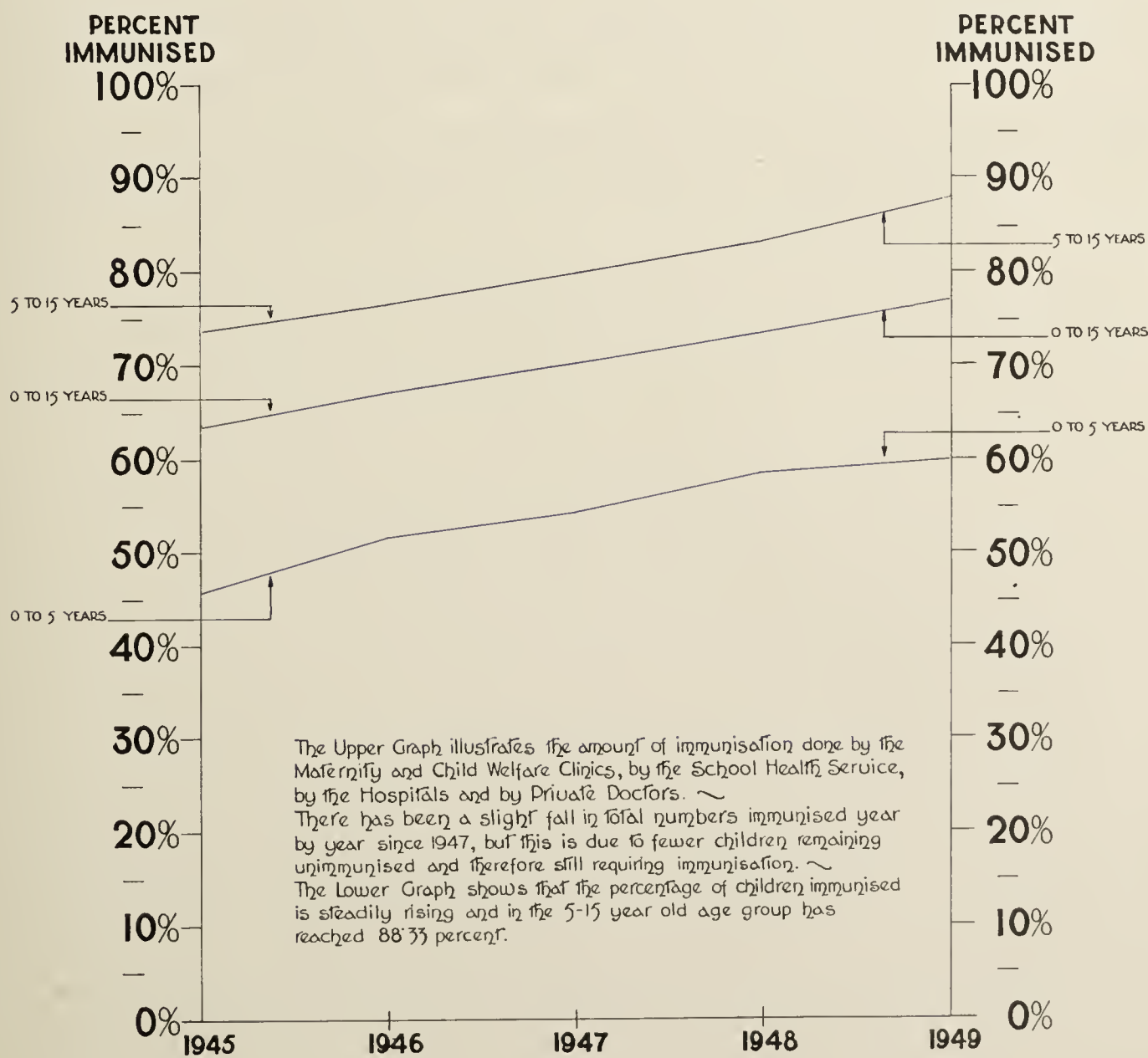
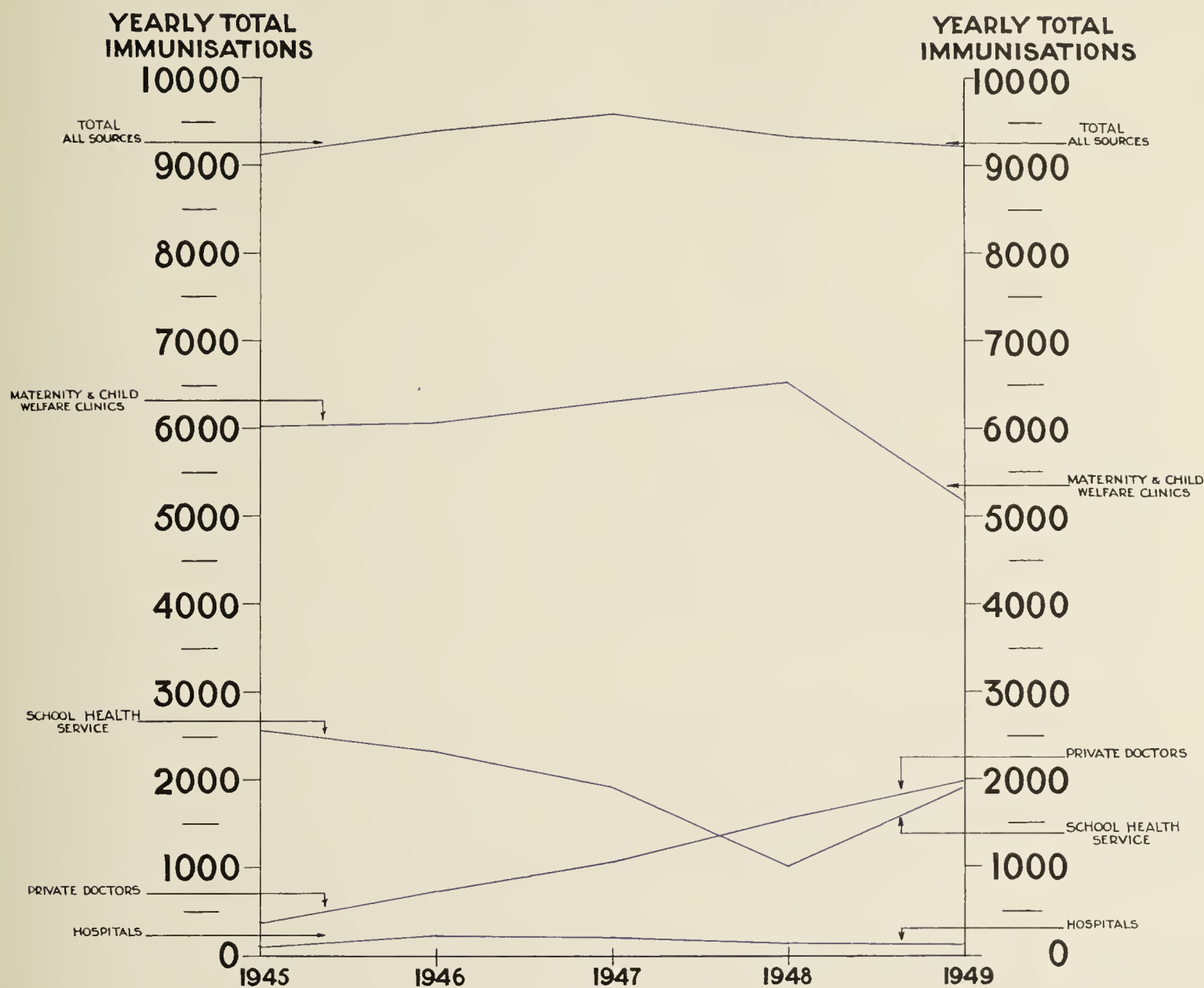
			Aged under 5 yrs.	5 yrs. and under 15 yrs.	15 yrs. and over.	Total.
Number of persons immunised as at						
31st December, 1949	..	..	26,391	60,948	31,559	118,898

Importance is attached to the necessity of each child who has been immunised in infancy being given a reinforcing injection at the age of five years, or when entering school. The following statement shows the number of children in the age group of five and under 15 years who have been given these injections from the outset, in May, 1944, until 31st December, 1949 :—

Year.									Number of children given reinforcing injections.
1944 (8 months) ..	..	..	..	..	..	..	..	..	1,972
1945 .. ..	..	..	..	..	..	..	..	..	2,311
1946 .. ..	..	..	..	..	..	..	..	..	5,006
1947 .. ..	..	..	..	..	..	..	..	..	3,515
1948 .. ..	..	..	..	..	..	..	..	..	4,146
1949 .. ..	..	..	..	..	..	..	..	..	5,325



PROGRESS OF DIPHTHERIA IMMUNISATION DURING THE PAST 5 YEARS 0-15 AGE GROUP







The following statement gives a classification of primary immunisations completed and reinforcing injections given in the year 1949 :—

					Primary immunisations	Reinforcing injections
At Maternity and Child Welfare Centres	..				5,199	—
By School Health Service	..	..	..		1,950	4,521
At Hospitals	..	..	..	..	124	—
By General Medical Practitioners	..		..		2,006	804
TOTALS	..	..	..	..	<u>9,279</u>	<u>5,325</u>

Constant efforts are made to encourage more children to be immunised and parents are made aware, by every possible means, of the importance of availing themselves of this service in order that their children may obtain immunity. The increasing popularity of immunisation is demonstrated by the fact that 60 per cent of all children under five years of age and 88 per cent of all children between 5 and 15 years of age in the City had been immunised by the end of 1949, as against 59 per cent and 84 per cent respectively at the end of 1948. During 1949, general medical practitioners carried out 21 per cent of all immunisations as against 17 per cent in 1948 and 11 per cent in 1947. It is very pleasing to see this volume of preventive medical work being done by general practitioners.

One confirmed notification of Diphtheria in the under 15 years age group in 1949 with no death compares very favourably with the 875 notifications and 21 deaths in this group ten years ago, in the year 1939, when very few children were immunised. Thus it would seem that mass immunisation has not only protected the large numbers of children inoculated but has also had the effect of lessening the likelihood of the disease occurring amongst the relatively small number of non-immunised children now remaining.

No arrangements have so far been made for protective inoculation against any diseases other than Smallpox and Diphtheria although much research is proceeding throughout the country with a view to developing an effective Whooping Cough prophylactic. Sheffield, at the request of the Minister of Health, is participating in this research by conducting an enquiry into the infectivity of Whooping Cough amongst children who are home contacts.

Also at the request of the Minister of Health, Sheffield, like other Local Authorities, supervises the certificates of inoculation against tropical diseases for persons travelling to certain areas abroad.

## AMBULANCE SERVICES

The arrangements made by the City Council in July, 1948, for the provision of ambulance facilities in accordance with the requirements of Section 27 of the National Health Service Act, 1946, have been continued, and the unified services set up under the administration of the Health Committee have been operated without any major modification. There were, however, certain recommendations made by the Association of Municipal Corporations, in connection with the incidence of cost and uniform rates of charge, and these recommendations were adopted by the City Council.

The administrative centre of the Service is at the Ambulance Station in Corporation Street ; 28 ambulances and four sitting case cars are operated from this Station, and a twenty-four hour service provided for the conveyance of non-infectious cases. Four ambulances continue to operate from the Lodge Moor Hospital Station and are used for cases of an infectious nature.

In addition to the services instituted under the Act, arrangements have been made for mutual assistance with adjoining Authorities and, at the request of the West Riding of Yorkshire and Derbyshire Authorities, ambulance cover is provided in certain parts of their areas which are adjacent to the City. The agreements made with these Authorities include both routine and emergency calls. In the case of the latter, the arrangements for transmission and servicing of accident calls have been made applicable to an area coinciding with the Sheffield Telephone Exchange area which extends into both the West Riding of Yorkshire and Derbyshire.

Agency arrangements were made between the Council and the British Red Cross (Sheffield Division) and the St. John Ambulance Brigade (Sheffield Corps) for the provision of ambulance services, and these voluntary organisations have each placed one ambulance at the disposal of the Service, as and when required.

**Duties Undertaken.**—There has been a gradual increase in the number of calls on the Service, with a corresponding increase in mileage run, and slight adjustment has been made in both personnel and vehicle establishments to maintain a satisfactory service.

In the main, the journeys undertaken have been associated with the conveyance of patients to and from Sheffield Hospitals and Treatment Centres, but the facilities provided are not limited to residents within the City, and several longer journeys have been made whilst conveying patients from Sheffield to more distant destinations.

A total of 294 long distance journeys, of over eighty miles each, were undertaken and they were connected mainly with the discharge of patients from Sheffield Hospitals ; but 68 journeys were made to the Ministry of Pensions' Hospitals and Limb Fitting Centres, and 57 journeys to Convalescent Homes situated at Skegness and Southport were also undertaken. Altogether, a distance of nearly 46,000 miles was covered in performing this section of the work.

The destinations of the various long distance journeys made during the year, with the number of visits to each shown in parentheses, were as follows :—

Accrington, Lancs. (1), Ashford, Kent (1), Aylesbury, Bucks. (2), Barton-on-Humber (2), Batley, Yorks. (1), Beverley, Yorks. (3), Birkenhead (3), Birmingham (2), Bognor Regis, Sussex (1), Brecon (1), Bristol (1), Bridlington (2), Blackburn (1), Blackpool (1), Burley-in-Wharfedale (1), Burton-on-Trent (2), Boston (16), Caistor, Lincs. (1), Catterick, Yorks. (1), Chester (1), Cleethorpes (5), Coningsby, Lincs. (1), Coventry (1), Derby (9), Dewsbury (1), Frome, Somerset (1), Grimsby (24), Halifax (3), Harwich (1), Harrogate (1), Harlech, Merioneth (1), Holbeach, Lincs. (1), Hornchurch, Essex (1), Hull (8), Hunstanton, Norfolk (1), Ilkley, Yorks. (4), Keighley, Yorks. (4), Kirby Moorside, Yorks. (1), Leeds (68), Leicester (5), Lincoln (5), Liverpool (1), Loughborough, Leicestershire (1), London (2), Louth, Lincs. (3), Mablethorpe, Lincs. (2), Macclesfield, Cheshire (1), Manchester (5), Market Rasen, Lincs. (4), Middlesbrough (1), Nelson, Lancs. (1), Newark (3), Northolt, Middlesex (1), Nottingham (5), Nuneaton, Warwick (1), Oswestry, Shropshire (1), Oundle, Northants (1), Oxford (3), Rhyl (1), Scarborough (2), Scunthorpe, Lincs. (9), Sleaford, Lincs. (1), South Shields (1), Southport (10), Spalding, Lincs. (6), Skegness (47), West Kirby, Cheshire (1), Willington, Durham (1), Woodhall Spa, Lincs. (1), Workington, Cumberland (1), York (4).

These 311 destinations were co-ordinated, and resulted in 294 journeys being made.



Special arrangements were made to deal with calls of an urgent nature, and emergency ambulances conveyed 3,928 patients as a result of either accident or sudden illness. There were also 42 calls for transport to convey hospital doctors and nurses to maternity patients requiring blood transfusion at their homes.

Cars were made available for the use of Municipal Midwives in the night hours when ordinary transport was not available, or in other emergencies, and there were 762 requests for this service. In addition, a further 171 journeys were made in delivering nitrous oxide cylinders to midwives.

SUMMARY OF PATIENTS CARRIED AND MILEAGE RUN DURING THE YEAR 1949.

On whose behalf.						Number of Patients carried.	Mileage run.
Sheffield City Council	..	..	..	..	..	93,326	440,043·1
West Riding County Council		..	..	..	..	463	7,251·5
Derbyshire County Council	..	..	..	..	..	4,830	33,334·9
Other Authorities	..	..	..	..	..	30	652·3
TOTALS				..	..	98,649	481,281·8

**Staff.**—At 31st December, 1949, the personnel of the Ambulance Service consisted of 10 administrative and 71 operational staff (41 drivers, 20 attendants, five shift leaders and five staff nurses.)

The provision of a twenty-four hour service necessitates all members of the operational staff working shift duties. Drivers and attendants are required to hold First Aid qualifications and the majority of them have attained medallion proficiency. It is also a condition of their service that they attend refresher courses at reasonable intervals and during the year a series of lectures in First Aid and kindred subjects has been held on the premises of the Ambulance Station.

The staff nurses are all certified midwives and their work is, for the most part, in connection with the admission of maternity and other female patients to Sheffield hospitals.

Notwithstanding the very frequently urgent nature of the work in this service, there have been remarkably few accidents during the year and, of the 35 ambulance drivers entered for the National Safe Driving Competition for the year 1949, there were seven drivers who received a bar to the five years' medal, two qualified for the five years' medal and 20 drivers were awarded the diplomas issued by the Royal Society for the Prevention of Accidents.

**Maintenance of Vehicles.**—The maintenance and repair of vehicles is carried out on the premises, and a staff of four mechanics and one apprentice is engaged on this work.

Although six new ambulances were received, there is still a number of old vehicles in the fleet, and several ambulances have been completely re-conditioned during the year.

## PREVENTION OF ILLNESS, CARE AND AFTER-CARE

The Care and After-Care Service, instituted during 1948, in accordance with the requirements of the National Health Service Act, 1946, is concerned with the prevention of illness, the care of persons suffering from illness and the after-care of such persons.

It is the intention of the Council to develop the service, in the light of circumstances and experience, so as to provide all necessary care and after-care to patients discharged from hospital and to other invalids, and considerable progress has been made in this direction.

As regards the care of tuberculous persons, there is liaison between the Care and After-Care Service and the specialist Medical Officers engaged in the Tuberculosis Service, which ensures that there is an early visit made by a Health Visitor to the home of any person notified as suffering from Tuberculosis. Any special need is reported and at once given attention. In addition, close co-operation has been effected between the Service and the almoners of the hospitals and other institutions. The Health Visitors visit the homes of patients at the request of the almoners, and it has been found that considerable benefit to the patient often results.

Patients and their families are being assisted in such ways as the following :—

**Tuberculosis.**—A primary visit is made to the home of every newly notified case of Tuberculosis, in order that a report on the home conditions may be obtained. In addition, arrangements are made for all contacts of the patient to attend the Chest Clinic for examination. Thereafter, the Health Visitors make periodic visits to the homes of notified cases and report to the Medical Officer of Health any special requirements of the patients, the appropriate action being taken as soon as possible. Every effort is made to keep in touch with patients until such time as further supervision is no longer considered necessary.

During the year 1949, the Health Visitors made a total of 5,559 visits to the homes of tuberculosis patients and the Male Social Worker made a total of 1,267 visits. Thus there were, in all, 6,826 visits, as detailed in the statement below :—

### VISITS BY HEALTH VISITORS :—

#### Tuberculosis of Lungs :—

For general investigation	..	..	..	..	..	4,487
<i>Re</i> home conditions upon discharge from Sanatoria	..	..	..	..	..	461
						————— 4,948

#### Other Forms of Tuberculosis :—

For general investigation	..	..	..	..	..	611
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TOTAL	..	..	..	..	..	5,559
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### VISITS BY MALE SOCIAL WORKER.

#### Tuberculosis of Lungs :—

For investigation of new cases	..	..	..	..	..	677
Periodic re-visits to positive cases	..	..	..	..	..	117
						————— 794

#### Other Forms of Tuberculosis :—

For investigation of new cases	..	..	..	..	..	88
--------------------------------	----	----	----	----	----	----

#### All Forms of Tuberculosis :—

For general investigation	..	..	..	..	..	385
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TOTAL	..	..	..	..	..	1,267
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Beds and bedding are loaned to necessitous infectious cases of Tuberculosis of the Lungs, in order that they may have a separate bed and, where possible, a separate bedroom. Details of the articles loaned during the year 1949 are as follows :—

54 Bedsteads ; 61 Mattresses ; 46 Mattress Covers ; 191 Sheets ; 125 Blankets ; 115 Pillows ; 132 Pillow Cases.



Where it is found to be desirable that a family in which there is an infectious case of Tuberculosis should be re-housed, efforts are made to provide suitable accommodation on the Corporation Estates, by arrangement between the Estates and Health Committees. As a result of the visits made by the Health Visitors to the homes of tuberculous persons during the year 1949, there were 101 cases where the environmental conditions were unsatisfactory and re-housing of the patients was desirable. 79 families were re-housed in the year. Since the inception of this scheme, in the year 1928, 817 families have been re-housed on Corporation Estates. At 31st December, 1949, there were 313 families living on the Estates under these special arrangements.

**Venereal Disease.**—In October, 1949, the trained Female Social Worker ceased her duties in connection with the Care and After-Care Service which deals with Venereal Disease. Owing to the shortage of staff on the Health Visiting side, it has not been possible to replace her, up to the present time, but arrangements have been made for special investigations to be carried out when necessary.

**Other Illness (or illness generally).**—The Care and After-Care Service is in process of expanding beyond the spheres of Tuberculosis and Venereal Disease, so as to cover the whole field of prevention of illness generally. In this field, the staff of Health Visitors is associated with the Care and After-Care Service and will play an increasing part in the health education, not only of the patient, but of the whole family unit.

Arrangements have been made for certain Health Visitors to be attached to the Hospitals, the Chest Clinic and the Radium Centre as part of their work, with a view to providing an interchange of information regarding the environmental conditions of patients entering the various hospitals or attending other institutions, and also to obtain any relative information regarding patients who are discharged and for whom the After-Care Service may be able to provide further assistance. It is hoped that assistance will be increasingly given in dealing with the many social problems associated with ill-health.

This scheme is still in the experimental stage and, although the preliminary arrangements appear to be working satisfactorily, the position is constantly under review by all concerned so that, in the light of experience gained, necessary improvements can be made, thereby ensuring that patients will obtain full benefit from the scheme.

#### **PROVISION OF NURSING REQUISITES FOR PERSONS CONFINED OR NURSED AT HOME.**

The arrangements which were made with a number of voluntary and other organisations as agents of the Council, for the loaning of articles of nursing equipment and apparatus from their stores of these requisites to patients who are being confined or nursed at home, continued throughout the year. As time goes on, the intention is to acquire the equipment of any of these organisations wishing to dispose of it, so that it may be brought into the arrangements for direct distribution by the Care and After-Care Service. The Council's own stocks of nursing requisites have also been increased by direct purchases from time to time, and centres from which these articles may be loaned are established at the Care and After-Care Centre at Town Hall Chambers in Fargate, at Johnson Memorial Nurses' Home in Endcliffe Crescent, at Meersbrook Vestry Hall and at Norton Rectory.

The following are particulars of nursing requisites loaned by the several organisations participating in this scheme and also of the requisites loaned directly by the Council during the year 1949 :—

## REQUISITES LOANED BY VOLUNTARY AND OTHER ORGANISATIONS AS AGENTS OF THE COUNCIL.

Articles.								Number of articles loaned
Air Cushions and Rings..	..	..	..	..	..	..	..	363
Bed Blocks	..	..	..	..	..	..	..	8
Bed Cages	..	..	..	..	..	..	..	28
Bed Pans ..	..	..	..	..	..	..	..	334
Bed Rests	..	..	..	..	..	..	..	219
Breast Pumps	..	..	..	..	..	..	..	17
Crutches (pairs)	..	..	..	..	..	..	..	120
Enema Syringes	..	..	..	..	..	..	..	36
Feeding Cups	..	..	..	..	..	..	..	17
Hot Water Bottles	..	..	..	..	..	..	..	62
Ice Bags ..	..	..	..	..	..	..	..	1
Invalid Chairs	..	..	..	..	..	..	..	62
Rubber Sheets	..	..	..	..	..	..	..	254
Sorbo Cushions	..	..	..	..	..	..	..	1
Sputum Cups	..	..	..	..	..	..	..	6
Steam Kettles	..	..	..	..	..	..	..	3
Urinals ..	..	..	..	..	..	..	..	148
Walking Sticks	..	..	..	..	..	..	..	9
Water and Air Beds	..	..	..	..	..	..	..	13
Water Pillows	..	..	..	..	..	..	..	1
TOTAL ARTICLES								1,702

## REQUISITES LOANED DIRECTLY BY THE COUNCIL.

Articles.								Number of articles loaned
Air Cushions and Rings..	..	..	..	..	..	..	..	208
Bed Cages .. .. .	..	..	..	..	..	..	..	15
Bed Pans .. .. .	..	..	..	..	..	..	..	202
Bed Rests .. .. .	..	..	..	..	..	..	..	76
Commodes .. .. .	..	..	..	..	..	..	..	3
Crutches .. .. .	..	..	..	..	..	..	..	28
Dunlopillo Mattresses .. .. .	..	..	..	..	..	..	..	7
Enema Syringes .. .. .	..	..	..	..	..	..	..	57
Feeding Cups .. .. .	..	..	..	..	..	..	..	18
Invalid Chairs .. .. .	..	..	..	..	..	..	..	21
Rubber Sheets .. .. .	..	..	..	..	..	..	..	217
Sorbo Cushions .. .. .	..	..	..	..	..	..	..	1
Sputum Cups .. .. .	..	..	..	..	..	..	..	6
Steam Kettles .. .. .	..	..	..	..	..	..	..	3
Urinals (Male) .. .. .	..	..	..	..	..	..	..	92
Urinals (Female).. .. .	..	..	..	..	..	..	..	10
Walking Sticks .. .. .	..	..	..	..	..	..	..	24
Water and Air Beds .. .. .	..	..	..	..	..	..	..	20
Water Pillows .. .. .	..	..	..	..	..	..	..	15
<b>TOTAL ARTICLES .. .. .</b>								<b>1,023</b>



## CONVALESCENCE FACILITIES.

The arrangements for providing convalescence facilities for persons who have been ill, but whose active period of treatment is over, continued throughout the year. Twelve beds for males are reserved at the North Eastern Counties Friendly Societies' Convalescent Home, Grange-over-Sands; the Hunstanton Convalescent Home provides accommodation for up to six women and ten children, and the Charnwood Forest Convalescent Home provides accommodation for up to ten children. The Hunstanton Convalescent Home is closed from 1st December to 28th February each year, and women have been sent to the West Hill Convalescent Home, Southport, during this period. In addition, certain patients disqualified from admission to the Convalescent Homes at Grange-over-Sands and Hunstanton (*e.g.*, those suffering from asthma, or those on light diets, etc.) have been referred to Southport. Patients requiring special diets are disqualified from admission to most Convalescent Homes, but it has been possible to arrange the admission of such cases to the Sheffield Works' Convalescence Association's Homes at Ashover and Matlock.

The Almoner of the Children's Hospital has referred certain children under school age with a view to the Local Authority being responsible for maintenance of these children in Convalescent Homes after their active period of treatment is over. It is often extremely difficult to obtain the admission of very young children to Convalescent Homes, but cases have been accepted at the Sefton Convalescent Home for Babies, Swanscoe House Convalescent Home, Macclesfield, and St. Joseph's Convalescent Home, Freshfield.

Patients are accepted for an initial period of convalescence of two weeks, with provision for extending this if necessary. In all cases, a recommendation of a medical practitioner is required and all the circumstances are investigated by the Care and After-Care Service before a patient is admitted to a Convalescent Home. A scale of weekly charges is laid down, the amount payable being assessed in relation to the family income.

In cases where patients may lack confidence about the journey to the Convalescent Home, efforts are made to introduce them to other patients travelling at the same time, in order that they may be of mutual assistance and their worries reduced to a minimum. When children are travelling to the Hunstanton Convalescent Home, arrangements are made, through the Care and After-Care Service, for them to be accompanied by suitable adult patients travelling at the same time. The parents of the children are introduced to the temporary guardians, in order that there should be no confusion and that parents may be satisfied as to their children's welfare during the journey ; a member of the staff of the Care and After-Care Service is also present at the station to ensure that the arrangements for the care of the children are satisfactory.

During the year 1949, there were 165 cases in which convalescence facilities were provided. These admissions may be summarised as follows :—

	Adults		Children		Total
	M	F	M	F	
North Eastern Counties Friendly Societies' Convalescent Home, Grange-over-Sands .. .. .	55	—	—	—	55
Hunstanton Convalescent Home .. .. .	—	73	1	3	77
West Hill Convalescent Home, Southport .. .. .	1	11	—	—	12
Sheffield Works' Convalescence Association's Home (Matlock) .. .. .	—	2	—	—	2
" " " " (Ashover)	2	—	—	—	2
Yorkshire Foresters' Convalescent Home, Bridlington .. .. .	—	1	—	—	1
Charnwood Forest Convalescent Home .. .. .	—	—	—	1	1
Sefton Convalescent Home for Babies .. .. .	—	—	4	2	6
Swanscoe House Convalescent Home, Macclesfield .. .. .	—	—	3	2	5
St. Joseph's Convalescent Home, Freshfield .. .. .	—	—	—	4	4
TOTALS .. .. .	58	87	8	12	165

Highly satisfactory reports regarding the Convalescent Homes have been received from patients upon their return to Sheffield, and the great majority of patients have derived considerable benefit from their visits to the Homes.

Information is recorded with regard to Convalescent Homes other than those already mentioned, in order that their services, some of which are of a specialist nature, may be utilised if necessary.



### B.C.G. VACCINATION AGAINST TUBERCULOSIS.

Arrangements have been made for the vaccination by B.C.G. of children who have been exposed to the risk of infection from Tuberculosis, especially babies born into tuberculous households.

Particulars of contacts vaccinated are forwarded to the Medical Officer of Health and special "follow-up" visits are made by Health Visitors.

Certain tests are carried out before vaccination, and only those who do not react to these tuberculin tests receive B.C.G. It is important to avoid contact with known sources of infection while tuberculin-testing and vaccination are being carried out, and arrangements have been made for the segregation of the children to be vaccinated—for six weeks prior to the vaccination and six weeks thereafter—making a total period of three months. It is intended, in conjunction with the Children's Officer, to set up a panel of foster parents in the City, in order to facilitate the segregation for this period. An appeal has been made for nurses and similarly trained women to offer their services.

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## DOMESTIC HELP

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In response to increasing demand, the Domestic Help Service was expanded during 1949. The object of this service, as defined in the National Health Service Act, 1946, is to provide domestic help "for households where such help is required owing to the presence of any person who is ill, lying-in, an expectant mother, mentally defective, aged, or a child not over compulsory school-age within the meaning of the Education Act, 1944." For convenience these cases have been divided in the Department's records into (a) maternity cases and (b) general cases.

The Domestic Helps are engaged and paid by the Council and are under the general supervision of the Superintendent Health Visitor. A scale of daily charges for their services has been formulated and the amount payable is assessed according to the income of the family concerned. Application for the services of a Domestic Help is made to the Maternity and Child Welfare Centre, Orchard Place, and, in all cases where it is necessary, the homes of new applicants are visited by a Health Visitor in order that there may be a full appreciation of the difficulties of the household.

Normally, the period of duty of the Domestic Help in maternity cases is limited to ten days after the confinement, but general cases, including as they do the aged and infirm, usually require help over a longer period. In any event, the Domestic Help is not available beyond a period of eight weeks, unless an extension has been granted after review of all the circumstances.

The duties of a Domestic Help relate to the purely domestic work of the household, such as : cooking and preparation of meals, keeping the house clean, and care of children ; she does not, of course, do any nursing duties, and she provides her own food whilst at duty.

Five whole-time and three part-time Domestic Helps were appointed at the outset of the Scheme in January, 1945, and the expansion of this service is apparent from the fact that, by 31st December, 1949, the complement had increased to 32 whole-time and 27 part-time staff ; arrangements were made to complete an establishment of 40 whole-time and 40 part-time workers during the early part of 1950. It is proposed to appoint a full-time organiser of this service as soon as circumstances demand.

During the year 1949, domestic help was supplied to : 255 maternity cases, at which a total of 2,747 full days was worked by the Domestic Helps, and 422 general cases, at which (making allowance for the fact that most of these were part-time engagements) the equivalent of a total of 7,431 full days was worked. 359 of the general cases were new applications and 63 were re-applications. A full working day consists of two periods of four hours each, and part-time engagements are for four hours daily.



## MENTAL HEALTH SERVICE

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The co-ordination of the two sections of the Mental Health Service referred to in the Annual Report for 1948 has proceeded satisfactorily throughout the year.

Dr. F. J. S. Esher, Regional Psychiatrist of the Sheffield Regional Hospital Board has maintained his sessions at the clinic at the Mental Health Centre, with an increasing number of persons making use of the facilities afforded. This clinic is now frequently used by statutory and other bodies to help them decide on the appropriate method of resolving certain specific social problems.

Dr. Arthur G. Yates is responsible for advising the Magistrates as to the mental state of health of those patients who have been referred to him under the provisions of the Lunacy and Mental Treatment Acts and who are usually in observation wards.

A night and day service, on a rota system, is maintained by the Duly Authorised Officers, and it is noticeable that the calls made on the services of these officers during the night hours do not diminish.

The increasing co-operation between the staff of the Mental Health Service and those of the Regional Hospital Board and Ministry of Labour has again shown good results. Certain patients referred to the Department by the Regional Hospital Board have been enabled to attend rehabilitation courses organised by the Ministry of Labour. As in previous years, satisfactory work has been found for ex-patients in good homes or with sympathetic employers.

**Mental Deficiency.**—At the end of the year 1949, there were 1,067 mental defectives on the Register, as compared with 1,026 at the end of 1948. The 1,067 cases are classified as follows :—

Cases	Males	Females	Total
Under Statutory Supervision .. ..	462	470	932
Under Statutory Supervision and awaiting admission to Institutions .. ..	47	38	85
Under Guardianship .. ..	1	1	2
On licence from Institutions .. ..	26	22	48
	536	531	1,067

### ASCERTAINMENT.

71 cases of possible mental defect were referred to the Department during the year, in order that they might be examined and their mental state ascertained ; 51 were referred by the Local Education Authority and 20 from other sources. 50 of the cases were ascertained to be mental defectives, and the remaining 21 were awaiting examination at the end of the year. 45 cases were placed under statutory supervision, and 5 were admitted to institutions or added to the list of cases awaiting admission to institutions.

### CARE OF MENTAL DEFECTIVES IN THEIR OWN HOMES.

At 31st December, 1949, there were 1,067 mental defectives living in their own homes under the supervision of the Department. 48 of them were on licence from institutions, two were under Guardianship, and the remainder, numbering 1,017, were under Statutory Supervision. During the year, 34 cases were removed from the Register of Mental Defectives, as they had proved themselves capable of managing their own affairs without further supervision.

The visiting staff made 3,456 visits to the homes of mental defectives during the year. This number includes, in addition to visits of Statutory Supervision, visits for the purpose of making reports on the home circumstances of institutional cases in connection with applications for discharge, licence or holiday leave and for the purpose of providing the necessary information in regard to cases due for reconsideration under Section 11 of the Mental Deficiency Act, 1913, as regards certification. The Inspectors also : accompanied 101 mental defectives to and from institutions, were present at the medical examinations of 130 cases, and attended at Court in regard to 41 cases.

*Occupation Centre.*—The capacity of the Occupation Centre at Pitsmoor was increased, during late 1948, by about one-third, and, during the past year, full advantage has been taken of the better amenities and facilities for training. The increased accommodation has made it possible to relieve, to some extent, the heavy pressure on institutional accommodation. Trainees have been admitted for protective purposes whilst awaiting vacancies in institutions. A few patients have been received who have been discharged from institutions on condition that they attend the Centre as a preliminary to taking up employment in the industrial field.

The health of the trainees has been uniformly good, and medical and dental examinations have been given by the Deputy Medical Officer of Health, who found that, generally speaking, the physical condition of the trainees was good. Any defect, e.g., dental defect, was attended to. Parents attended all medical examinations of their children.

At the request of the National Association of Mental Health, one of their full time students has been given instruction in Occupational Therapy, and the continuation of this procedure is under consideration.

The extended development of hand weaving has been particularly interesting—especially as the looms were designed and constructed at the Centre to suit the various disabilities found among the trainees. Beneficial results have been achieved from patients suffering from physical deformity and from those of low mentality.

Alterations to the garden are in progress, the work being carried out by the adult male trainees. This work will provide a recreation ground which could be used for open air classes.

There were 84 defectives on the register of the Centre at the end of the year: 45 being adult males, six adult females and 33 junior males. The average daily attendance of adults was 40 and of juniors 25. 13 seniors and 13 juniors were admitted during the year, and five seniors and four juniors left the Centre; two took up employment, two entered institutions and two left because they were unsuitable to continue training. Special transport is provided for the juniors and the crippled seniors to and from the city.

32 patients were taken for 14 days' holiday at the Y.M.C.A. holiday camp near Saltburn in May, 1949.

Parents of the trainees are invited at regular intervals to inspect the work of the children. This is much appreciated.

The Centre is now working at full capacity.

**Mental Illness.**—When any person is notified to the Department as suffering from mental illness, a Duly Authorised Officer at once visits the home to interview the person and his relatives, with the object of taking all necessary measures for the proper care of the patient. The following statement gives an analysis of the action which was taken with regard to the 772 patients who were admitted to hospital during the year 1949 :—

1. Patients suffering from mental illness and admitted to Fir Vale	
Infirmary Mental Observation Wards .. .. .	608
2. Patients admitted to Middlewood Hospital :—	
(a) As Voluntary Patients .. .. .	140
(b) As Temporary Patients .. .. .	9
(c) On Urgency Orders .. .. .	2
	— 151
3. Patients admitted to sick wards of general hospitals.. .. .	13
	—
Total cases admitted to hospital .. .. .	772
	=====

The 608 cases shown in Item 1 were dealt with as follows :—

(a) Certified and admitted to Middlewood Hospital .. .. .	359
(b) Admitted as Voluntary Patients to Middlewood Hospital .. .. .	27
(c) Admitted as Temporary Patients to Middlewood Hospital .. .. .	52
(d) Discharged following a period of observation .. .. .	169
(e) Died during the period of observation .. .. .	1
	—
Total .. .. .	608
	=====



In addition, there were 99 visits made by Duly Authorised Officers in relation to cases where it was decided that admission to the observation wards or to hospitals was not the most desirable course in the circumstances. These cases were referred to other sources, such as : psychiatric clinics, the patients' own medical advisers, the Social Care Service, Probation Officers, the Children's Officer, etc.

Advice upon many matters affecting patients is constantly sought from the Mental Health Service by patients' relatives and by doctors, the police, probation officers and others. Patients are encouraged to get into touch with the Department on their return from hospital, and relatives and dependants are frequently assisted in those problems which invariably arise in most households, during and following a period spent in hospital by one of the members, and particularly where the patient or former patient is the normal source of the household income.

It is gratifying to observe that the prejudice which formerly existed against treatment in mental hospitals has diminished to a marked degree, and that patients and relatives much more readily seek and accept advice in this direction. Every endeavour is made, from the occasion of the first contact with the sick person, to work in a spirit of co-operation.

## HEALTH CENTRES

---

The question of Health Centres has been actively pursued during the year.

It was realised that the premises at the Firth Park Maternity and Child Welfare Centre (part of which had been vacated after their use for some years as a Social Welfare Centre), could be adapted to provide a Health Centre. Discussions to this end were carried on with the doctors in the area, the Sheffield Executive Council and the Ministry of Health. Some of the doctors were prepared to enter the Centre, and plans were made to accommodate six general medical practitioners; it would be possible to arrange provision for the following services :—

General Medical Services

Pharmaceutical Services

Maternity Clinic

Infant Welfare Centre

{ together with a nursery for the children of mothers attending  
the Centre; and with arrangements for health education,  
including a projector for health propaganda films

Dental Services

Vaccination and Diphtheria Immunisation

Health Visiting

Care and After-Care Service

Any other Local Health Services which it may be desirable and practicable to provide  
Specialist and Ancillary Services.

Plans of the original building and also of its adaptation for use as a Health Centre follow this page of the report.

Much discussion took place, and there was a visit to the Ministry of Health to secure agreement on details before formal proposals were submitted. It was estimated that the adaptation could take place at very little cost.

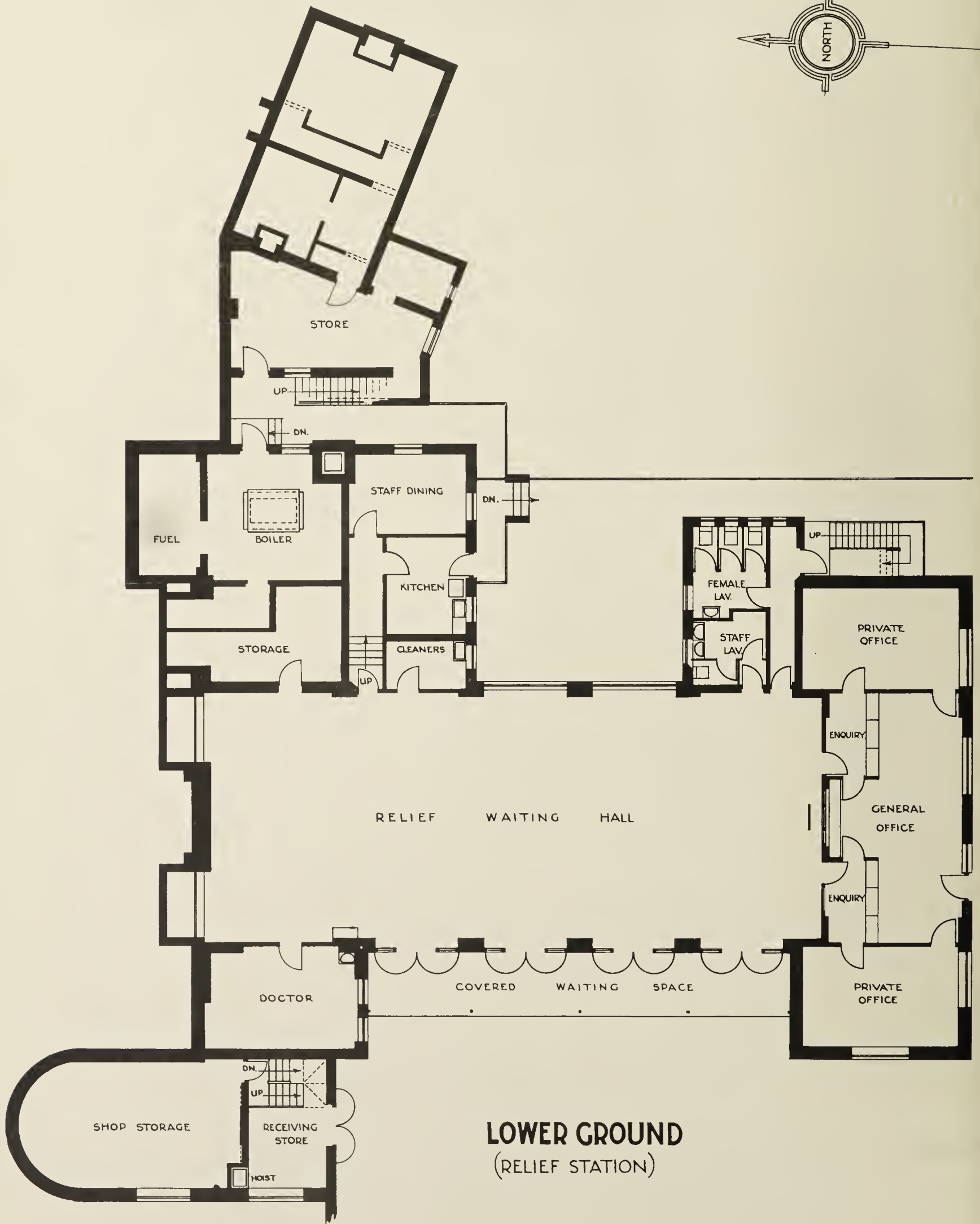
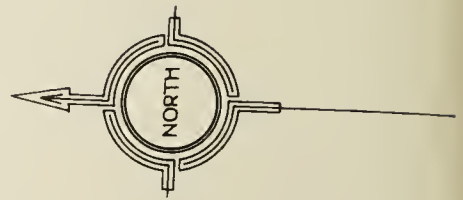
Unfortunately, the doctors concerned ultimately felt that they could not agree to working in a Health Centre.





# MATERNITY AND CHILD WELFARE CENTRE AND RELIEF STATION FIRTH PARK

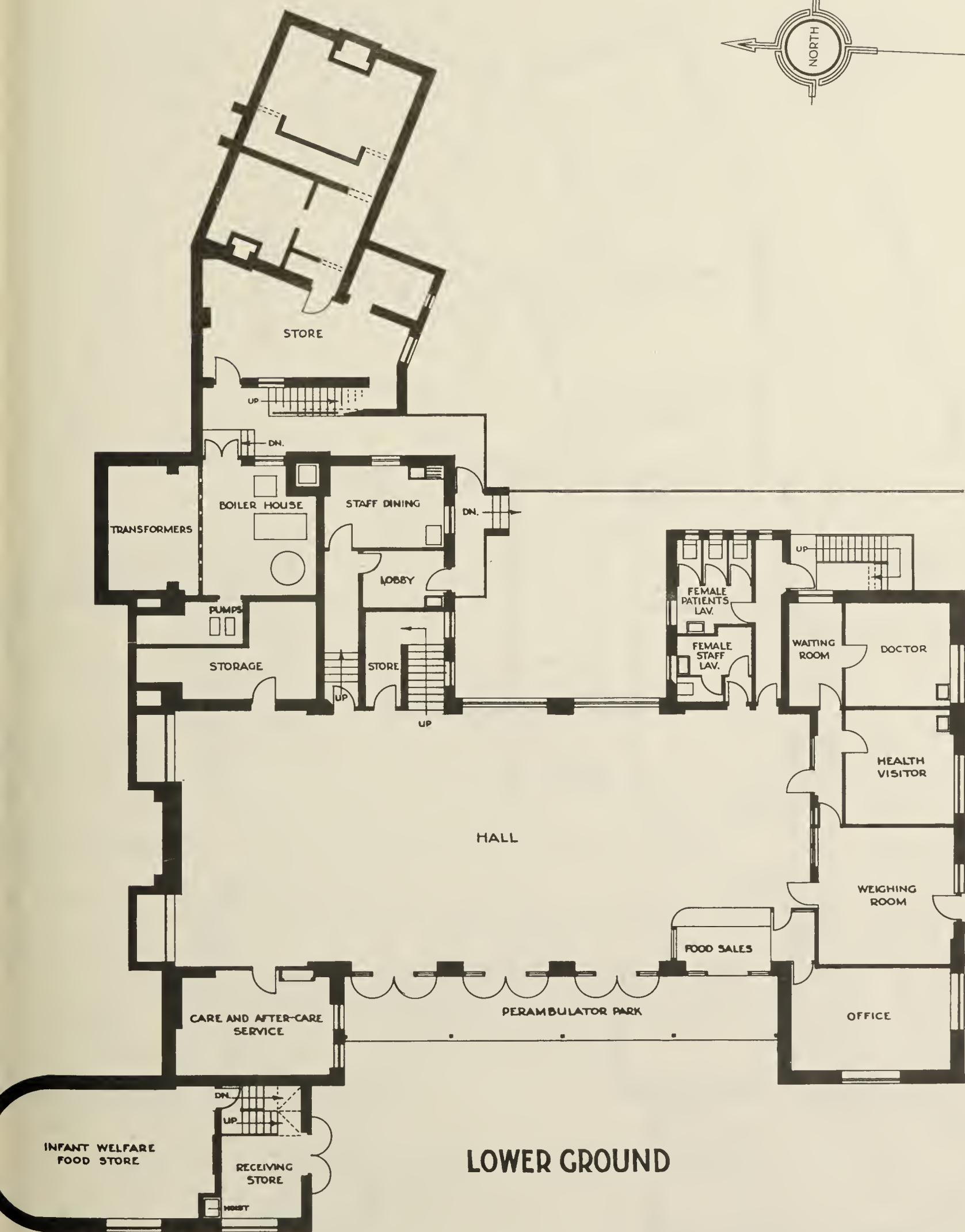
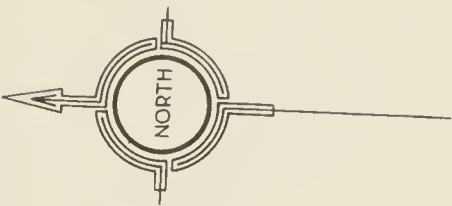
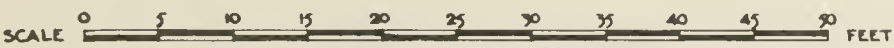
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**LOWER GROUND**  
(RELIEF STATION)

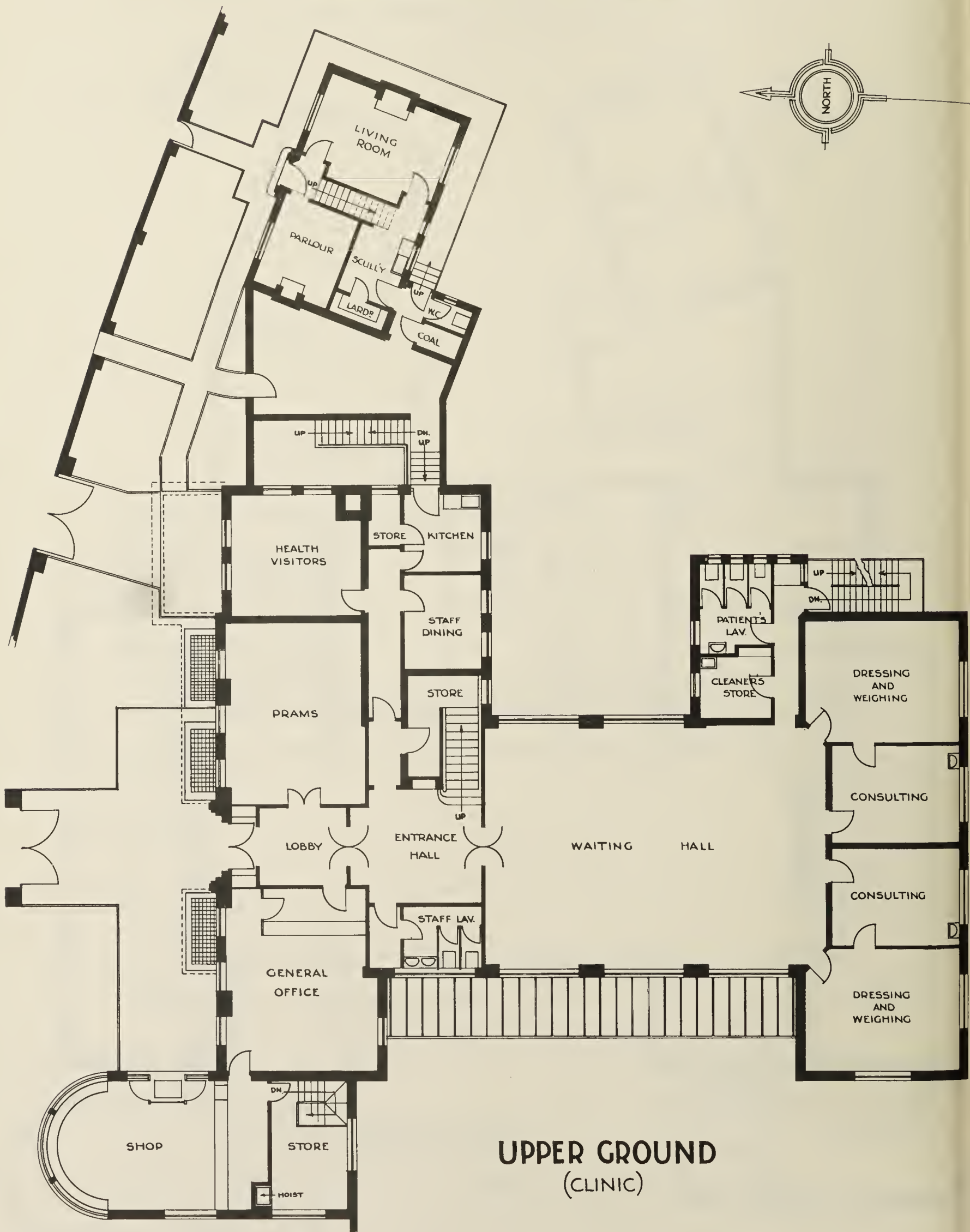
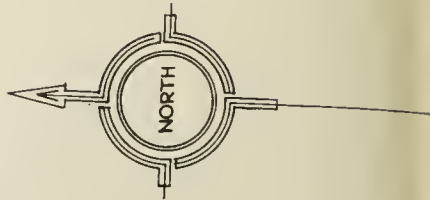


# PROPOSED ADAPTATION AS A HEALTH CENTRE



# MATERNITY AND CHILD WELFARE CENTRE AND RELIEF STATION FIRTH PARK

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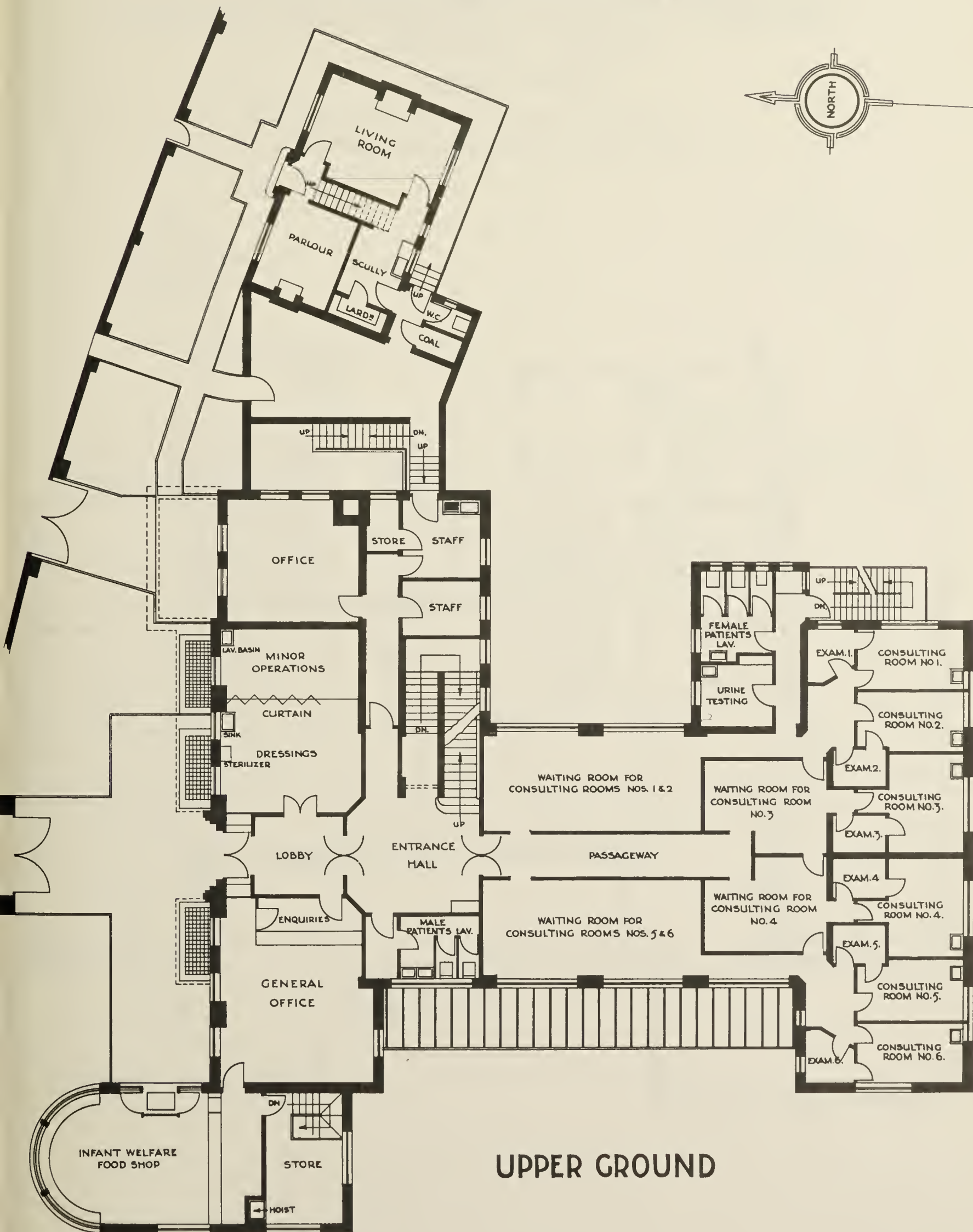
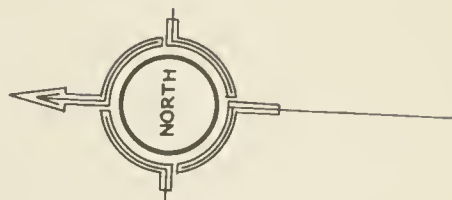


UPPER GROUND  
(CLINIC)



# PROPOSED ADAPTATION AS A HEALTH CENTRE

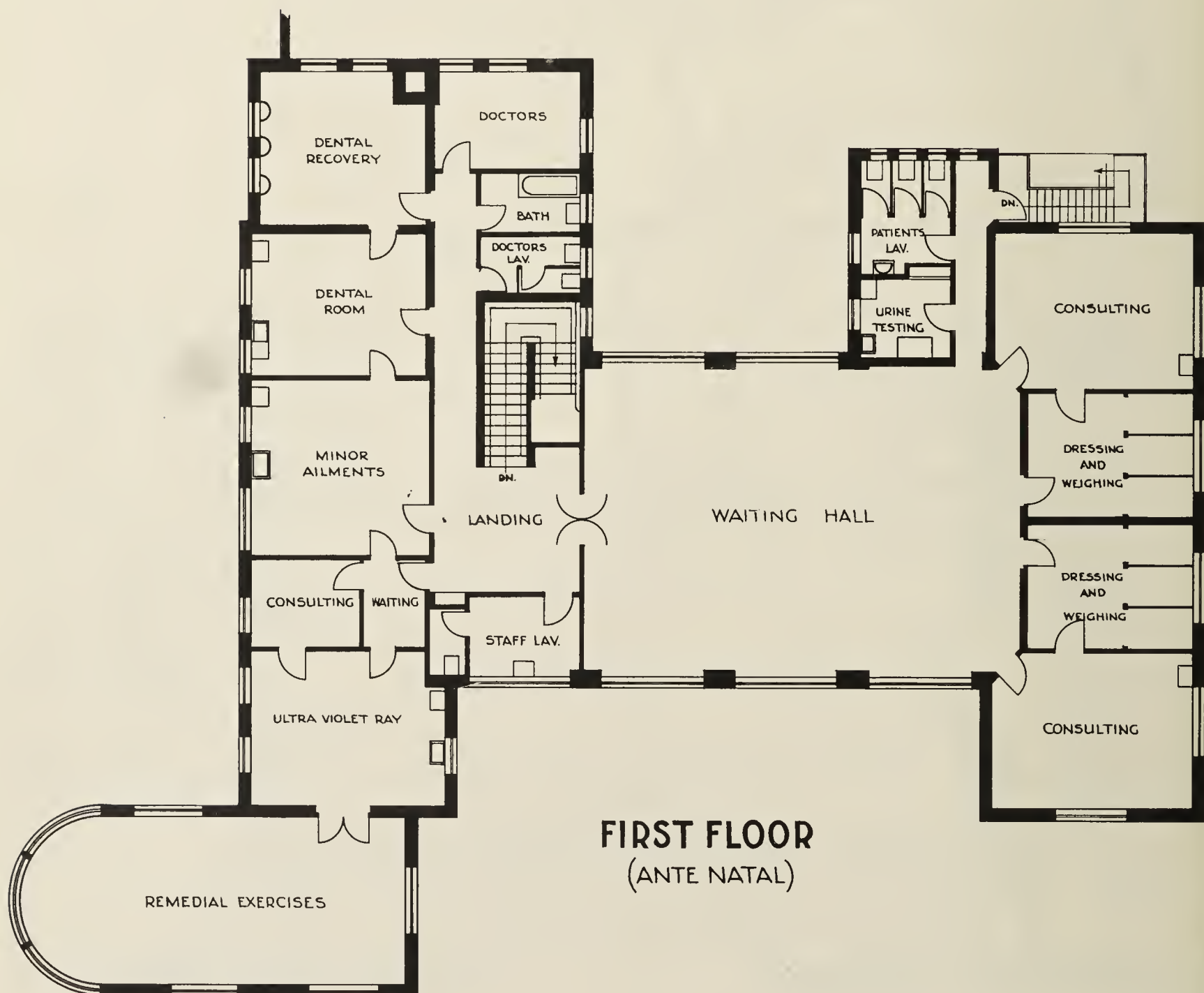
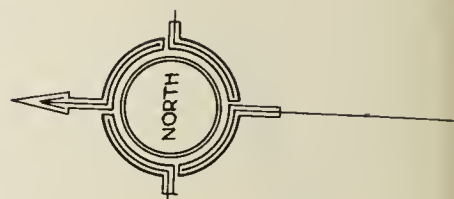
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UPPER GROUND

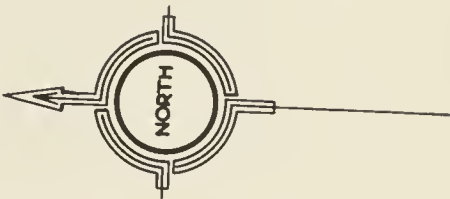
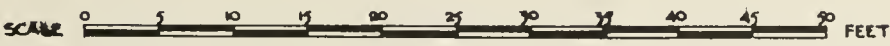
# MATERNITY AND CHILD WELFARE CENTRE AND RELIEF STATION FIRTH PARK

SCALE 0 5 10 15 20 25 30 35 40 45 50 FEET





PROPOSED ADAPTATION AS A HEALTH CENTRE



FIRST FLOOR





## HEALTH EDUCATION DURING 1949

---

Members of the staff of the Department have given a considerable amount of instruction in connection with the undermentioned Courses arranged by the Sheffield College of Commerce and Technology at the Corporation Abattoir, the markets and at other appropriate establishments :—

Building Construction, Sanitary Engineering, Plumbing Science, Sanitary Inspection, Food and Drugs Inspection.

The co-operation of the Public Health Department is essential in the training of the University Medical Student who, during the early part of his clinical training, undertakes a series of visits with Sanitary Inspectors and with Health Visitors in order to gain practical experience of social conditions. The final year medical students also spend eight half days in paying instructional visits to places of public health interest.

Lectures by members of the staff are also given in connection with the courses of instruction for Queen's Nurses, which are held at the Johnson Memorial Home.

Two Courses of 12 lectures were given to pupil midwives at Nether Edge Hospital ; these pupils, Children's Hospital Nurses and student Queen's Nurses also paid instructional visits to the Maternity and Child Welfare Clinics.

Many Girl Guides and Rangers receive instruction in Child Care at the Nurseries and from Health Visitors.

During the year there were four Probationer Sanitary Inspectors in the Department, and one ex-serviceman was attached to the Department for eight weeks during his special course of training as an Inspector. Eight of the Day Nurseries have been approved as Training Nurseries for National Nursery Examination Board students, and one Nursery is also approved for the training of State Enrolled Assistant Nurses.

Two students were attached for training to the Occupation Centre, and lectures by members of the Mental Health Service were given in connection with two Courses for Mental Health Workers, which were held at Sheffield University. One Officer attends one night per week at the Club organised by the Sheffield Voluntary Association for Mental Welfare.

Officers from most sections of the Department have also lectured to members of such organisations as : ToC "H," St. John Ambulance Brigade, Women's Institutes, Church Organisations, Townswomen's Guild, Council of Social Service, Industrial Catering Association, Community Associations, and Youth Clubs. Ten parties of visitors were conducted round the Workshops for the Blind.

It will be seen that much of this work is in connection with courses of training, but it is felt that the lectures and demonstrations of a more popular nature have been well worth while in educating members of the public in improved methods of hygiene and child care, and in disseminating information concerning the Public Health Services which are now available.

PUBLIC HEALTH BACTERIOLOGY

By L. GORDON COOK, M.B., Ch.B., D.P.H., Director, Public Health Laboratory,  
City General Hospital, Sheffield, 5.

Public Health bacteriology for the City of Sheffield is carried out by the staff of the Medical Research Council, at the Area Public Health Laboratory which is situated in the Department of Pathology, at the City General Hospital.

Close liaison continues to be maintained with the Medical Officer of Health and the various departments under his control, and the following statement gives a general picture of the work carried out in the field of diagnosis, research and investigation into outbreaks of infectious and contagious disease in the City during the year 1949.

Examination of Milk.							Number showing tubercle bacilli.
							Number tested.
BIOLOGICAL TEST	..	..	..	..	..	..	748
							55
OTHER TESTS.							Number tested.
							Number satisfactory.
Bacterial Count	..	..	..	..	..	..	344
							306
Methylene Blue test	..	..	..	..	..	..	358
							354
Bacillus Coli test	..	..	..	..	..	..	306
							213
Turbidity test	..	..	..	..	..	..	2
							2
Phosphatase test	..	..	..	..	..	..	66
							—

Examination of Water.

55 samples of water were tested during the year. Of the 32 samples of drinking water, 21 were satisfactory and the remainder were considered to be unsatisfactory or doubtful.

All the waters taken from the swimming baths were highly satisfactory. The chlorine content was most satisfactory and the bacteriological content low. It was considered highly improbable that persons using the baths would be at risk to a bacteriological infection.

General Infectious Diseases.

DIPHTHERIA.					Number of swabs	Number negative to C. Diphtheriæ	Number positive to C. Diphtheriæ
					459	456	3
In addition, 39 swabs were examined for diphtheria virulence.							
ENTERIC AND SALMONELLA GROUP.					Number of tests.		Number positive.
Blood serum agglutinations	..	..	..	..	131		44
Blood cultures	..	..	..	..	6		—
Mice fæces	..	..	..	..	3		—
Fæces and Urine cultures	..	..	..	..	911		42
Samples of food and vomit	..	..	..	..	42		17

Tuberculosis.

3,900 specimens of sputum were examined for tubercle bacilli and, of these, 913 were positive. The majority of these, however, were repeat specimens.

DYSENTERY GROUP.										No. of cases
Flexner Z	..	..	..	..	..	..	..	..	..	13
Flexner 119	..	..	..	..	..	..	..	..	..	6
Flexner W	..	..	..	..	..	..	..	..	..	1
Sonne	..	..	..	..	..	..	..	..	..	17

Venereal Diseases.

BLOODS.					Number of tests.	Number positive.
Wassermann test	..	..	..	..	19,558	1,058
Kahn test	..	..	..	..	5,413	2,135
Gonococcal Fixation test	..	..	..	..	369	69
CEREBROSPINAL FLUIDS.						
Wassermann test	..	..	..	..	1,132	40

In addition to the above, 412 smears were examined for the presence of genococcus and, of these, 18 were positive.



### **Streptococcal Infection.**

364 swabs and two specimens of sputum were examined for the presence of hæmolytic streptococci.

### **Biological Examinations.**

289 biological examinations for the diagnosis of tuberculosis were performed in addition to those already mentioned under the heading, "Examination of Milk." Of these, 84 were positive.

### **Food Poisoning.**

During the year, several investigations were carried out on outbreaks of food poisoning.

In the first investigation, three samples of cooked meat were suspected of having caused the outbreak. On examination of the specimens submitted, only one specimen was found to be infected with *Staphylococcus pyogenes*. No swabs were submitted from the food handlers.

The second investigation concerned food poisoning considered to have been caused by cooked rabbit and chicken sold from a butcher's shop. The food examined was found to be heavily contaminated with faecal organisms. A paper bag, which had contained sandwiches, yielded *Staphylococcus aureus* in large numbers.

The number of people at risk was unknown, but 11 cases are known to have been infected, among which were 4 requiring hospital treatment. Symptoms were diarrhoea and vomiting, occurring some two hours after eating the infected food. The person chiefly concerned with the preparation of the food was found to have a dermatitis of both hands and wrists which had existed since childhood. *Staphylococcus aureus*, coagulase positive, was isolated (a heavy growth) from hands and wrists. The same phage type was isolated from : patients' excreta, the rabbit, and the hands of the man (eczema).

Another outbreak of food poisoning was found to be due to cooked tongue served from a canteen. Four people were affected, four hours after eating the tongue, which had been cooked four days previously and subsequently stored. Persons who ate part of the tongue within two days of its being cooked, suffered no ill effects. *Staphylococcus aureus* (the same phage type in all cases) was isolated from the tongue in extremely heavy numbers and also from the hands of the butcher and his wife, who prepared the tongue.

In a fourth outbreak of food poisoning, 60 persons at a Nurses' Home were taken ill 20-22 hours after partaking of a meal of meat, dried peas and water, supplied by a catering firm, which issued meals to other institutions at the same time. No cases were reported, apart from those in the Nurses' Home. All the patients recovered quickly. A heavy growth of *Staphylococcus aureus* was isolated from partly healed burns on the cook's hands. Two other food handlers were found to be nasal and hand carriers of *Staphylococcus aureus*.

In a fifth outbreak affecting 50 out of 67 people who attended a dinner, no food was submitted for examination. *Staphylococcus aureus*, in large numbers, was isolated from cuts on hands of food handlers.

In a sixth outbreak, 21 people were taken ill after lunch at a canteen. Recovery from the usual symptoms was rapid. It was found, on investigation, that the pastry cook had had diarrhoea for a week prior to the outbreak. No pathogens were isolated from specimens submitted from the cook—who did not attend, as suggested, for further investigation.

### **Scarlet Fever.**

An investigation was carried out on an outbreak of scarlet fever in the Sheffield School for the Blind, in which seven cases occurred in one month.

Six of the cases yielded Group "A" streptococci; one was type 1, three were type 4, and one was untypable.

Group "A" streptococci were isolated from the throats of twelve contacts, all pyrexial at the time, but which were probably influenza cases; five were type 4, four were type 12, and three were untypable.

Prevalent scarlet fever strains among unconnected cases admitted to isolation hospital in the City were as follows :—types 1, 4 and 12.





# WELFARE OF THE BLIND

(AND OTHER HANDICAPPED PERSONS)

Opportunity was taken to introduce into last year's Annual Report an early statement on this Service. The particulars related to the year ended 31st March, 1949, and information which now follows is, in the main, a repetition of those statements. This arrangement will ensure that, in each future year, the report will comprise details of the services provided during the 12 months ending 31st March of the year under review.

## BLIND POPULATION STATISTICS.

**Sheffield Blind Register.**—The numbers of persons registered as blind in the ten years ended 31st March, 1949, are given in the following statement :—

1940	..	..	..	..	..	..	..	855
1941	..	..	..	..	..	..	..	850
1942	..	..	..	..	..	..	..	858
1943	..	..	..	..	..	..	..	901
1944	..	..	..	..	..	..	..	921
1945	..	..	..	..	..	..	..	919
1946	..	..	..	..	..	..	..	922
1947	..	..	..	..	..	..	..	921
1948	..	..	..	..	..	..	..	902
1949	..	..	..	..	..	..	..	906

**Distribution of Local Blind Persons.**—Details follow, of the distribution of local blind persons :—

Institutional :—

Institutional :—	M.	F.	Total
Children at Schools for the Blind .. .. .	3	3	6
Employed in Sheffield Workshops for the Blind .. .. .	52	24	76
Employed at Royal Blind School .. .. .	1	—	1
Training in Sheffield Workshops for the Blind .. .. .	2	—	2
Training at Technical Training Centres .. .. .	3	—	3
In homes of the Royal Sheffield Institution for the Blind	12	9	21
In Firvale Infirmary and Nether Edge Hospital .. .. .	18	35	53
In Mental Hospitals .. .. .	10	19	29
In other Homes or Institutions .. .. .	4	7	11
	<hr/> 105	<hr/> 97	<hr/> 202

### Non-Institutional :—

Balance	..	..	..	..	..	..	320	384	704
			TOTALS	..	..	..	425	481	906

**Registration of Blindness.**—During the year ended 31st March, 1949, 107 names were added to the local register of blind persons and 103 names were removed. Details are shown in the following statement :—

Number of registered blind persons at 31st March, 1948	..	—	902
Number registered : 1st April, 1948 to 31st March, 1949	..	99	—
Removals into the City	.. .. .	8	—
		—	107
			1,009
Deaths	.. .. .	83	—
De-Certified	.. .. .	2	—
Removals out of the City	.. .. .	18	—
		—	103
Number on register at 31st March, 1949	.. .. .		906

EMPLOYMENT.

(a) In Blind Workshops.—The following statement shows the sales and the productive wages paid to blind employees in the workshops during the last ten years :—

Year ended 31st March				Productive Wages £	Gross Sales £	Less Purchase Tax £	Total Net Sales £
1940 .. ..				3,490	12,050	—	12,050
1941 .. ..				3,925	14,233	267	13,966
1942 .. ..				4,371	18,543	836	17,707
1943 .. ..				5,010	24,468	1,484	22,984
1944 .. ..				5,966	26,009	1,535	24,474
1945 .. ..				6,441	28,791	1,531	27,260
1946 .. ..				5,845	26,920	1,758	25,162
1947 .. ..				6,441	30,976	2,380	28,596
1948 .. ..				7,342	39,412	3,443	35,969
1949 .. ..				8,216	40,651	3,107	37,544

The number of blind persons under training or employed in the workshops at the 31st March, 1949, is shown in the statement below :—

DEPARTMENT IN WHICH EMPLOYED												
Area of Responsibility		Administration and Miscellaneous		Men's Department						Women's Dept.		TOTAL
				Basket	Boot	Brush	Mat					
Sheffield—	.											
Workers	..	..	4 —	12 —	9 —	20 —	10 —	21 —				76
Trainees	..	..	— —	— —	— —	— 1	— 1	— —				2
Rotherham—												
Workers	..	..	— —	4 —	— —	4 —	3 —	2 —				13
Trainees	..	..	— —	— —	— —	— —	— 2	— —				2
West Riding of Yorkshire—												
Workers	..	..	— —	2 —	— —	1 —	— —	1 —				4
Trainees	..	..	— —	— —	— —	— —	— —	— —				—
Derbyshire—												
Workers	..	..	2 —	1 —	— —	— —	— —	1 —				4
Trainees	..	..	— —	— —	— —	— —	— —	— —				—
Doncaster—												
Workers	..	..	— —	1 —	— —	— —	— —	— —				1
TOTALS..		..	6 —	20 —	9 —	25 1	13 3	25 —				102
			Workers, 98.		Trainees, 4.		Total, 102.					

(b) In Approved Home Workers Schemes.—There were five approved Home Workers and these were employed as under :—

Lecturer .. ..	..	..	..	..	..	..	..	..	1
Music Teacher .. ..	..	..	..	..	..	..	..	..	1
Piano Tuners .. ..	..	..	..	..	..	..	..	..	3
									—
									5
									==

(c) In Open Industry.—At 31st March, 1949, 39 blind persons were employed outside the local blind workshop.

Four were employed as Telephone Operators, two as Masseurs and one each as Agent, Basket Worker, Boot Repairer, Mat Maker, Music Teacher, School Teacher and Shopkeeper.

26 others were employed on other work in sighted industry.



### OTHER BLIND WELFARE SERVICES.

**Visitation and Lessons.**—The following statement gives details of the visits paid and lessons given by the six home teachers on the staff of the Department :—

Visits paid for special reasons .. .. .	807
Visits of routine character .. .. .	2,795
Individual lessons given .. .. .	515
Social services rendered .. .. .	361
	<hr/>
	4,478
	<hr/>

**Embossed Literature.**—During the year, 6,702 volumes of embossed literature (including both Moon and Braille books) were issued. This number included 5,894 volumes sent out direct by the National Library for the Blind, and 808 volumes issued through this Department, most of which were books on loan to the Department from the Library. The City Council pay a yearly grant of £270 towards the cost of this service, and the Library pay postage both ways on all volumes issued by them.

**Handicraft Classes.**—The weekly woodwork class, under Mr. A. L. Robinson, is still very popular and a number of the men have made real progress.

A fortnightly handicraft class for the deaf-blind is very much appreciated. The success of the class is increased by the attendance of a number of voluntary helpers in addition to our own Home Teachers.

The weekly classes for men and women have continued, and good attendances have been maintained.

**Comforts and Chiropody Treatment.**—Certain welfare services were discontinued from 5th July, 1948, e.g., free milk, eggs, and grants for special need, as those services are now being provided by the National Assistance Board. The provision of free dentures and spectacles was also discontinued, but other comfort aids (such as the provision of white sticks) and chiropody treatment, where necessary, were, however, continued.

The Canadian Red Cross Society on two occasions presented cases of wool to the then Lord Mayor (Ald. W. E. Yorke, C.B.E., J.P.), and he allocated these to the Department for distribution among the Blind.

**Wireless Sets.**—This service is now being maintained on a very satisfactory standard, and is well justified as a welfare service. A better supply of new sets considerably increased its value. The Department has continued to employ a full-time wireless mechanic.

**Bath Tickets.**—The Disabled Persons Welfare Sub-Committee and the Cleansing and Baths Sub-Committee jointly continued to meet the cost of free tickets for the public baths for blind persons.

**Passes for Trams and Buses.**—At the 31st March, 1949, 800 free passes were on issue to blind persons, entitling them to travel, without charge, on the tramcars and certain motor bus routes. Thanks are tendered to the Transport Committee for the free issue of these passes, and to the inspectors, drivers and conductors of the Transport Department for the unfailing help given to the blind holders.

**Provision of Entertainments.**—Thanks and appreciation are also offered to the following, who arranged concerts :—

Balfour's Orchestra ; City of Sheffield Police Male Voice Choir ; Mr. Cyril Cooper ; The Dulcimer Singers ; Gay Ambassadors' Concert Party ; Mr. Reg. Greenwood ; The Joysters ; The Laughter Makers' Concert Party ; The Totley Dramatic Society ; Sheffield Transport Department Concert Party ; and Miss Pansy Wragg.

50 blind people and their guides greatly enjoyed the pantomime visited at two matinees at the Lyceum Theatre by courtesy of the management.

Sheffield Wednesday Football Club kindly allocated, for the use of blind men, 12 free stand tickets for all First Team matches during season 1948-49.

**Brass Band.**—The Brass Band, under Mr. J. H. Argyle, has, unfortunately, suffered through the loss of some of its members for various reasons. The obtaining of replacements was a great difficulty, but there has, however, been some improvement.

**Dramatic Society.**—The Society, under Miss Elizabeth Mackenzie, L.G.S.M. (Eloc.), again gave two very successful productions, each consisting of 3 One-Act Plays. The producer reports that there has been a distinct improvement in the standard of playing. In addition to two public performances for each production, the Society always had one free evening for the blind.

**Recreation Clubs.**—The Chess Club had a good season and were hosts for the annual chess match between the two local chess associations. Five members of the Sharrow Grange team were in the Works' Association team.

The Dance Club Section resumed activities and had some successful dances.

#### **SHEFFIELD JOINT BLIND WELFARE COMMITTEE.**

This Committee was formed in January, 1948, co-ordinating the welfare work now being done by the Royal Sheffield Institution for the Blind and this Department.

During the year, the programme for united social work with the Royal Sheffield Institution for the Blind has been consolidated. The Home Teachers from both bodies are working together on : club work, handicraft classes and hospital visitation.

In September, 1948, the Joint Committee arranged an outing to Cleethorpes in two sections for the employed and unemployed blind and, in all, about 900 blind persons and their guides participated.

The Men's Club, which opened on 16th February, 1948, continued, and was very well attended. The Monday meetings were mainly for games, and sports talks were introduced at these as a monthly feature. Lectures arranged by the Workers' Educational Association were given at the Tuesday meetings.

Evening dances and whist drives were held regularly and were well supported and very much enjoyed.







# SANITARY ADMINISTRATION

In the year 1949, the staff of Sanitary Inspectors made a total of 59,286 visits to, and inspections of, dwelling-houses under the Public Health Act, 1936, for the investigation and abatement of nuisances, a considerable proportion of which was brought to the notice of the Department by complaints of tenants. These visits and inspections related, in all, to 15,019 houses. Visits of investigation, in regard to infectious and other notifiable diseases and many other visits in the general sanitary administration of the City, were also made by the staff of Sanitary Inspectors during the year, and details of these visits are to be found in Table XVI within this section of the Report.

**Infectious Disease—Investigation and Disinfection.**—The Sanitary Inspectors made 8,112 visits of investigation during the year, at households where infectious or other notifiable diseases had occurred. In addition, 4,248 homes were visited by the staff of the Disinfecting Station for the purpose of carrying out disinfection at the houses on account of the occurrence of notifiable or other disease. Beds and bedding, the patient's clothing and other articles which had been in contact with the patient, were collected by the staff and taken away for disinfection by steam.

**Treatment of Scabies.**—Treatment of Scabies was provided in premises at the City General Hospital and at the Disinfecting Station in Plum Lane. Whenever a case of Scabies is brought to the notice of the Department, every effort is made to induce all the members of the family to undergo treatment. 375 persons, including 179 school children, attended for treatment during the year either as patients or as contacts. The number of persons treated for Scabies has steadily reduced since the peak year of 1942, when 5,729 persons were treated. In all instances, whilst the treatment is being given, the personal clothing is disinfected by steam. In addition, beds and bedding are collected from the homes and steam disinfected, and this was done in the case of 64 families during 1949. After treatment, all cases are followed up by visits to the home by the Health Visitors.

**Disinfestation.**—The use of D.D.T. for the eradication of insect pests, a service which commenced in 1945, was continued during the year 1949. D.D.T. has proved to be very satisfactory for dealing with bugs, fleas, cockroaches, beetles, crickets, silverfish, steam flies and other insects. The use of D.D.T. has largely replaced Cyanide, and has become the standard method for house disinfestation and for the disinfestation of premises generally. It has been found convenient, according to the circumstances, to apply the D.D.T.—either by spraying, in the form of an emulsion, or by distributing it, through a mechanical blower, as a powder containing a percentage of D.D.T. A charge is made to the occupiers of the premises for these services. 600 premises were disinfested with D.D.T. during the year 1949, as follows: 244 Corporation Houses; 122 other Corporation premises, including Schools, etc.; 215 private houses; and 19 miscellaneous premises, such as shops, warehouses, works' canteens, and hospitals, etc.

The use of Cyanide for disinfestation continued on a small scale during the year. 202 families were removed to Corporation Housing Estates during the year, and their furniture and effects were disinfested by Cyanide in air-tight steel containers in order to eradicate bug infestation. The beds and bedding were treated by steam disinfestation.

**Cleansing of Verminous Persons.**—61 persons attended at the Disinfecting Station during the year for treatment for the eradication of vermin. A special disinfecting bath and cleansing treatment were given in all these cases, and the personal clothing and bedding were disinfested. The use of D.D.T. in common lodging houses and houses let-in-lodgings, from which most of these cases emanate, has resulted in a decreasing number of persons who are infested with vermin, as is shown by the following statement of the numbers of persons who attended at the Disinfecting Station for treatment during the previous five years.

Year										Persons who attended for Treatment
1944	..	..	..	..	..	..	..	..	..	550
1945	..	..	..	..	..	..	..	..	..	343
1946	..	..	..	..	..	..	..	..	..	227
1947	..	..	..	..	..	..	..	..	..	107
1948	..	..	..	..	..	..	..	..	..	65



**Testing of Drainage Systems.**—1,035 smoke tests and 3,599 colour tests were applied during the year to drainage systems which were suspected of being defective. In certain instances, the staff of the City Engineer's Department collaborated with the Sanitary Inspectors in these tests. Where drains were found to be defective, the Sanitary Inspectors supervised the works of repair or reconstruction. 1,118 water tests were applied during the year to ascertain whether drains which had been relaid were satisfactory.

**Closet Accommodation.**—The schemes for the conversion of privies into water closets, for the provision of one water closet for each house in the City, and for the substitution of pail, trough and waste-water closets by pedestal water closets, virtually reached the completion stage some years ago. In the year 1949, 26 privies were converted into pedestal water closets; eight pail closets and five trough closets were converted into pedestal water closets; and three trough closets were abolished. A few privies and a few pail closets still remain; these are isolated ones, situated mostly in semi-rural districts where it has not been practicable to provide water closets owing to the fact that sewers or water are not reasonably available.

**Houses Let-in-Lodgings.**—The Sanitary Inspectors, in collaboration with the Health Visitors, visited houses let-in-lodgings in the City periodically during the year, with a view to remedying defects which were found and ensuring that there was compliance with the bye-laws.

**Factories.**—The following table gives particulars of the inspections made during the year under Part I of the Factories Act, 1937, and an analysis of the defects which were found, with particulars of the action taken.

**TABLE XV.**—*Inspections under Part I of the Factories Act, 1937.*

**1.—Inspections for purposes of provisions as to health.**

Premises (1)	Number on Register (2)	Number of		
		Inspections (3)	Written notices (4)	Occupiers prosecuted (5)
(i) Factories WITHOUT MECHANICAL POWER in which Sections 1, 2, 3, 4 and 6 are to be enforced .. .. .	530	130	11	—
(ii) Factories not included in (i) to which Section 7 applies :—				
(a) WITHOUT MECHANICAL POWER, but enforcement of Sections 1, 2, 3, 4 and 6 by Local Authorities revoked by the Local Authorities (Transfer of Enforcement) Order, 1938 .. .. .	14	5	—	—
(b) Others—i.e., factories WITH MECHANICAL POWER .. .. .	3,175	1,642	217	1
(iii) Other Premises under the Act (excluding out-workers' premises) ..	50	50	14	—
TOTAL .. .. .	3,769	1,827	242	1

**2.—Cases in which defects were found.**

Particulars (1)	Number of cases in which defects were found				Number of cases in which prosecutions were instituted (6)
	Found (2)	Remedied (3)	Referred To H.M. Inspector (4)	By H.M. Inspector (5)	
Want of cleanliness (S.1) .. ..	15	8	1	2	—
Overcrowding (S.2) .. .. .	—	—	—	—	—
Unreasonable temperature (S.3) ..	—	1	—	—	—
Inadequate ventilation (S.4) ..	—	—	—	1	—
Ineffective drainage of floors (S.6) ..	1	1	—	—	—
Sanitary Conveniences (S.7)—					
(a) Insufficient .. .. .	25	19	3	2	—
(b) Unsuitable or defective ..	307	179	14	26	1
(c) Not separate for sexes ..	22	10	—	4	—
Other offences (not including offences relating to Homework) .. ..	24	14	—	—	—
TOTAL .. .. .	394	232	18	35	1

With regard to the duties under Part VIII of the Act, relating to out-work, Sanitary Inspectors made visits during the year to the premises at which two out-workers were engaged upon work of a kind which requires to be supervised under this part of the Act. They were two workers in occupations connected with the electro-plating industry. None of the premises was in a condition which was injurious or dangerous to the health of the out-workers.

**Shops Act, 1934.**—Section 10 of the Shops Act, 1934, concerns the health and comfort of employees in wholesale and retail shops and warehouses, or elsewhere in connection with whole-sale or retail trade or business. The section deals particularly with : the ventilation, heating and lighting of these premises ; the facilities for taking meals and for washing ; and the facilities as to sanitary conveniences. As a result of action taken under this section during the year, there were eight instances where the owners of the premises, who were not complying in all respects with the provisions of Section 10, took the necessary remedial measures.

**Preserved Food—Preparation or Manufacture.**—During the year there were no new applications received for registration of premises under this heading. There were five cases where premises, which had been registered for such purposes, ceased business during the year.

**Ice Cream—Sale, Manufacture, etc.**—Premises which are used for these trades must also be registered, as required by Section 14 of the Food and Drugs Act, 1938. During the year 1949, four premises were registered for the manufacture for sale of ice cream, and 265 premises were registered for the sale only of ice cream. During the year, certain premises ceased to be used for the purpose for which they had been registered, three of which had been for the manufacture for sale of ice cream and 43 for the sale only of ice cream. It is a requirement under the provisions of the Ice Cream (Heat Treatment, etc.) Regulations, 1947, that ingredients of ice cream shall be heat-treated after being mixed and that the mixture shall then be cooled until the freezing process is begun. After freezing, the ice cream must be kept at a temperature of not more than 28 deg. F. until it is sold. An exception is made in the case of a manufactured product, described as a “ complete cold mix ”, which can be made into ice cream by the addition of water only and, when reconstituted for manufacture, must be converted into ice cream within one hour of reconstitution.

#### **The Food and Drugs Acts, 1938 and 1944.**

##### *The Milk and Dairies Regulations, 1949.*

On the 1st October, 1949, the Milk and Dairies Regulations, 1949, made under the powers conferred by the Food and Drugs Acts, 1938 and 1944, came into operation—requiring registration of Milk Distributors and Dairy Premises.

At 31st December, 1949, the following registrations had been granted :—

Milk Distributors residing inside the City	..	..	..	..	..	469
Milk Distributors residing outside the City	..	..	..	..	..	2
Dairy Premises	..	..	..	..	..	77

##### *The Milk (Special Designation) (Pasteurised and Sterilised Milk) Regulations, 1949.*

##### *The Milk (Special Designation) (Raw Milk) Regulations, 1949.*

On the 1st October, 1949, the above Regulations, made under the powers conferred by the Food and Drugs Acts, 1938 and 1944, came into operation—controlling the treatment and sale of milk described as “ pasteurised ”, “ sterilised ”, and “ tuberculin tested.”

At 31st December, 1949, the following licences had been granted :—

Dealers Pasteurisers' Licences	..	..	..	..	..	4
Dealers Sterilisers' Licence	..	..	..	..	..	1
Dealers Pasteurisers' Licence to pasteurise tuberculin tested milk	..	..	..	..	..	1
Licences to use the Special Designation “ Pasteurised ”	..	..	..	..	..	89
Licences to use the Special Designation “ Sterilised ”	..	..	..	..	..	363
Licences to use the Special Designation “ Tuberculin tested ”	..	..	..	..	..	70
Supplementary Licence to use the Special Designation “ Pasteurised ”	..	..	..	..	..	1
Supplementary Licence to use the Special Designation “ Sterilised ”	..	..	..	..	..	1
Supplementary Licence to use the Special Designation “ Tuberculin tested ”	..	..	..	..	..	1



**Fish Friers' Premises.**—At the end of 1949, 408 fish friers' premises were registered in the city. There were five new applications for registration during the year and, after investigation, all the premises were registered.

**Offensive Trades.**—There were seven premises on the Register of Offensive Trades at the end of the year; these were: three premises used for Tripe Boiling and Tripe Dressing, one Rag Storing premises, two Fat and Bone Dealers' premises and one Rag Washing premises. All these premises were periodically visited by the Sanitary Inspectors, to ensure that there was compliance with the bye-laws.

**Rag Flock Acts, 1911 and 1928.**—There are 17 premises in the City to which the above Acts apply, and these are chiefly Upholsterers' and Bedding Manufacturers' establishments. There are no premises where rag flocks are manufactured. In every case where rag flocks were used, they were obtained under a guarantee that they complied with the standard set forth in the Acts.

**Canal Boats.**—There were no registrations of canal boats in the City during 1949. The Canal Boats Inspector made 87 inspections of boats during the year, the object being to ensure that there was compliance with the requirements of the Public Health Act, 1936. There were 183 persons living on board the boats at the time of the inspections, and these persons were in the following age groups: six in the group of children under five years; seven in the group of between five and 14 years; 170 over 14 years; of these latter, 163 were males and seven females. The average number of occupants per boat was 2.1. When a boat, arriving in the city, is found to have a child of school age on board, unless this occurs during school holidays, a report is sent to the Director of Education.

24 infringements were found, relating to 19 inspections of the boats. All necessary measures were taken in regard to these infringements, and it was not necessary to institute any legal proceedings during the year.

There were no cases of infectious disease upon any of the canal boats during the year and it was not necessary to detain any boats for cleansing or disinfection.

**Summary of Visits, etc., of Sanitary Inspectors.**—In the table below are given, in summarised form, particulars of the visits and general work of the staff of Sanitary Inspectors in the year 1949:—

**TABLE XVI.**—*Summary of the Work of the Sanitary Inspectors during the year 1949.*

1.	Dwelling-houses affected by nuisances—							
	(a) Number of Houses	..	..	..	..	..	..	15,019
	(b) Number of Inspections	..	..	..	..	..	..	9,308
2.	Number of Smoke Tests applied to Drains	..	..	..	..	..	..	1,035
3.	Number of Water Tests applied to Drains	..	..	..	..	..	..	1,118
4.	Number of Colour Tests applied to Drains	..	..	..	..	..	..	3,599
5.	Visits to Work in progress	..	..	..	..	..	..	8,700
6.	Miscellaneous Visits	..	..	..	..	..	..	41,278
7.	Interviews with Owners or Representatives	..	..	..	..	..	..	1,615
8.	Dwelling-houses where Nuisances abated	..	..	..	..	..	..	13,452
9.	Paving Works supervised	..	..	..	..	..	..	583
10.	Visits for Infectious or other notifiable Diseases	..	..	..	..	..	..	8,112
11.	Visits <i>re</i> Overcrowding	..	..	..	..	..	..	722
12.	Visits for Disinfection of Premises	..	..	..	..	..	..	3
13.	Visits to Premises <i>re</i> Vermin	..	..	..	..	..	..	3,997
14.	Visits to Cowsheds	..	..	..	..	..	..	634
15.	Visits to Dairies	..	..	..	..	..	..	1,141
16.	Visits <i>re</i> Offensive Trades	..	..	..	..	..	..	39
17.	Visits to Fried Fish Shops	..	..	..	..	..	..	669
18.	Visits to Ice Cream Premises	..	..	..	..	..	..	1,011
19.	Visits to Bakehouses	..	..	..	..	..	..	281
20.	Visits to other Food Preparing Premises	..	..	..	..	..	..	1,067
21.	Visits <i>re</i> Shops Acts	..	..	..	..	..	..	159
22.	Visits to Workplaces	..	..	..	..	..	..	180
23.	Rag Flock Acts—Number of Premises Visited	..	..	..	..	..	..	60
24.	Notices served—							
	(a) Statutory	..	..	..	..	..	..	2,688
	(b) Informal	..	..	..	..	..	..	8,897
25.	Number of Cases in which Legal Proceedings taken	..	..	..	..	..	..	32
26.	Visits <i>re</i> Diseases of Animals Acts	..	..	..	..	..	..	446
27.	Visits <i>re</i> Rats and Mice Infestation	..	..	..	..	..	..	773

**Water Supply.**—The water supply provided by the Corporation to the City and District, and bulk supplies to outside Authorities, have been satisfactory both in quality and quantity. There was no curtailment at any time during the year.

All Sheffield's water comes from moorland gathering grounds. It is filtered and chlorinated at the source, and requires the addition of lime to prevent plumbo-solvent action. The lime dosage ensures an average permanent hardness of 3·3 parts per 100,000 and a total hardness of 4·8. The average pH value is 8·5.

The number of samples of drinking water examined in the laboratory during the year ended 31st December, 1949, was 2,148. Of this number, 2,063, or 96·04 per cent., were free from coliform organisms in 100 mls. and 2,108, or 98·14 per cent., were free from Bact. Coli, type I (an organism whose natural habitat is the human or animal intestine, and which is an indicator of excretal pollution of water), in 100 mls. Included in this number are some samples taken before chlorination.

The number of samples taken from consumers' taps during the year was 960 and of these, 940, or 97·92 per cent., were free from coliform organisms and 955, or 99·48 per cent., contained no Bact. Coli, type I, in 100 mls.

156 samples were taken from consumers' taps for examination for lead. Of these, 146, or 93 per cent., contained no lead, and the remainder contained traces ranging from 0·02 parts per 100,000 downwards. The samples containing lead were derived from two houses receiving a supply from an open service reservoir. The pH value of the water in this reservoir falls due to atmospheric pollution, and supplementary lining at the reservoir has enabled the lead to be eliminated.

As a first line of defence, the Undertaking exercises sanitary control over the entire watershed, by prohibiting developments which might contaminate the reservoir feeders, and by removing or sterilising night soil from every dwelling on the gathering grounds.

The number of dwelling-houses supplied direct was 164,580. No houses within the Sheffield area are supplied by standpipe. The population supplied direct was 541,035, and indirectly (via bulk supplies) 209,486.

(The above section of the report in regard to the Water Supply of the City has been furnished by the General Manager and Engineer of the Sheffield Corporation Waterworks).

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The Health Committee approved in principle a plan for the provision of a piped water supply from Corporation Waterworks mains to certain premises which, although within the City boundary, derive their water supplies from sources which cannot be considered as altogether satisfactory.

The arrangements included the provision of a water supply and drainage system in the Ringinglow and Long Line district and, by the end of the year, steps were in hand to carry out this work.



**Rodent Control.**—The Rodent Control service commenced on 10th April, 1944, being instituted as the result of responsibilities which devolved upon the Public Health Department under the Infestation Order, 1943. The Service is now operating under the Prevention of Damage by Pests Act, 1949, which came into force on the 31st March, 1950.

There were seven Rodent Operatives employed in this service at 31st December, 1949, and the service was in the charge of a Sanitary Inspector seconded to the position of Rodent Officer.

The services of the Rodent Operatives are made available upon application by the occupiers of infested premises, payment being upon a cost basis laid down by the Corporation. All premises in regard to which there are complaints of infestation by rats or mice are in the first instance visited by the staff of Sanitary Inspectors.

In the statement below are given the numbers of applications for the services of the Rodent Operatives which were dealt with in the years 1947 to 1949, together with the numbers of baiting points laid and the estimated numbers of rats and mice exterminated. The demand for these services has again increased during 1949, and considerably more baiting points continue to be laid.

Services Rendered.	Year		
	1947	1948	1949
Number of applications dealt with (Rat Infestation) ..	458	557	513
Number of applications dealt with (Mice Infestation) ..	504	543	1,015
Number of baiting points laid .. .. .	12,628	17,890	24,720
Estimated number of rats exterminated .. .. .	5,544	4,700	5,700
Estimated number of mice exterminated .. .. .	22,660	28,800	35,000

**Sewer Disinfestation.**—The scheme, which commenced on 7th May, 1945, for the disinfestation of the sewers, rivers and culverts of the City, continued in the year 1949. This work is undertaken by the City Engineer, who provides a staff of 6 operatives forming part of the Rodent Control service of the Public Health Department whilst engaged upon the work.

At the commencement of the scheme, in 1945, plans were formulated to deal initially with infestations in the central areas of the City and then to expand outwards so as to systematically treat the whole of the old built-up areas of the City.

The Ministry of Agriculture and Fisheries' procedure regarding the methods of pre-baiting and poisoning are adhered to throughout in this work. The disinfestation of sewers comprises what is known as an initial treatment, followed by maintenance treatments of a similar kind at six-monthly intervals. The sewers in the outlying areas of the City, including the newer Corporation housing estates, receive a "Pilot" test annually; that is to say, one in every ten sewer manholes is pre-baited, and any showing evidence of infestation are included in a full-scale treatment area.

The fifth maintenance treatment was completed during the year 1949. 18 lengths of the rivers: Don, Sheaf, Porter and Loxley, and Meersbrook and Shirebrook were included in this treatment. In addition, part of the sixth maintenance treatment was carried out, and also 19 lengths of the above rivers and brooks were included in the treatment. No Pilot test was considered necessary in these areas during the year.

Details of these maintenance treatments follow:—

FIFTH MAINTENANCE TREATMENT—YEAR 1949.

Areas treated	Number of manholes baited or points laid	Number of complete and partial "takes" recorded	Estimated number of rats killed
Areas Nos. 24 to 89 .. .. .	4,063	408	6,100
18 lengths of rivers: Don, Sheaf, Porter and Loxley, and Meersbrook and Shirebrook	2,445	412	6,125
TOTALS .. .. .	6,508	820	12,225

## PART OF SIXTH MAINTENANCE TREATMENT—YEAR 1949.

Areas treated	Number of manholes baited or points laid	Number of complete and partial “ takes ” recorded	Estimated number of rats killed
Sewer areas according to schedule .. ..	3,644	439	8,400
19 lengths of rivers : Don, Sheaf, Porter and Loxley, and Meersbrook and Shirebrook ..	2,227	490	7,330
TOTALS .. .. .	5,871	929	15,730

It will be seen from the two preceding statements that, during the year, the total number of manholes baited or points laid in applying maintenance treatment during the year 1949 was 12,379, and that the estimated number of rats exterminated was 27,955.



### SMOKE ABATEMENT.

The Sheffield, Rotherham and District Smoke Abatement Committee, a Regional Committee with full statutory powers for Smoke Abatement, has responsibility in regard to the five administrative areas of the City of Sheffield, the County Borough of Rotherham, the Urban Districts of Rawmarsh and Stocksbridge, and Rotherham Rural District. This Committee is the only statutory committee of its kind in the country, other regional committees for smoke abatement acting only in an advisory capacity.

The activities of the Committee in the year 1949, so far as they relate to the City of Sheffield, are briefly outlined below :—

*Action under the Public Health Act, 1936.*—Systematic observations of all industrial chimneys continued throughout the year, and much work was carried out in advising manufacturers and boiler-firemen on improved methods of working. The following are the details of the work done by the Smoke Inspectors in the City during the year 1949—

Number of chimneys observed (half hour observations)	..	..	3,468
Number of minutes smoke emitted	..	..	9,296
Average minutes of smoke emission per half hour	..	..	2·7
Number of Abatement Notices served	..	..	190
Number of Intimation Notices served	..	..	286
Number of Advisory Visits	..	..	563
Number of complaints dealt with	..	..	116
Prosecutions	..	..	7

From the above statement, it will be seen that the average of the minutes of smoke emitted per half hour, from the observation of chimneys in the year 1949, was 2·7 minutes. This compares favourably with 3·1 minutes in the year 1948, but not with the average of 1·4 minutes per half hour recorded in the year 1938.

Many cases of undue emission of smoke were reported to the Committee, but, in consequence of difficulties regarding the supplies of suitable fuel, legal proceedings were only instituted for seven offences; in six of the cases, Magistrates Orders were made to abate the nuisance and costs were imposed, and, in the other case, a penalty of £2 was imposed for non-compliance with an order to abate the nuisance.

*Atmospheric Pollution.*—The recording of the extent of atmospheric pollution continued throughout the year 1949 and, as a result of serious complaints from the Tinsley area, three additional gauges for determining the quantity of sulphur in the atmosphere by the lead peroxide method and a volumetric instrument were installed at Blackburn Meadows.

The table which follows gives information in regard to the averages of the monthly deposits of solid matter at the three fixed collecting stations in the five years, 1945 to 1949, together with the highest monthly deposit at each station in those years.

**TABLE XVII.**—*Solid Matter deposited at the fixed Sheffield Collecting Stations, during five years : 1945 to 1949.*

Year	TONS OF SOLID MATTER DEPOSITED PER SQUARE MILE.					
	ATTERCLIFFE		SURREY STREET		CRIMICAR LANE	
	Average Deposit per Month	Highest Monthly Deposit	Average Deposit per Month	Highest Monthly Deposit	Average Deposit per Month	Highest Monthly Deposit
1945 ...	42·08	58·62	22·74	28·57	11·77	20·39
1946 ...	39·95	48·99	26·12	40·24	10·74	21·37
1947 ...	40·49	58·54	35·15	77·37	11·55	21·44
1948 ...	36·24	47·76	24·81	36·71	14·05	24·36
1949 ...	40·22	70·22	25·93	32·52	13·03	19·28

It is interesting to note that the highest monthly deposit (70·22 tons per square mile), at the Attercliffe Collecting Station, was recorded during July, 1949, which was a rainy month following a very dry period.

The table below summarises the monthly records of solid matter deposited per square mile in the year 1949 at the six stations at which there were gauges for the measurement of atmospheric pollution :—

**TABLE XVIII.**—*Solid matter deposited at the Sheffield Collecting Stations during the year 1949.*

MONTH	TONS PER SQUARE MILE					
	Attercliffe	Crimicar Lane	Firth Park	Wincobank Sewage Works	Surrey Street	Weston Park
January ... ..	35·47	*	13·41	45·27	27·77	11·02
February ... ..	34·35	6·56	12·97	45·47	25·43	13·91
March ... ..	42·78	*	17·97	29·67	31·47	17·52
April ... ..	37·05	12·90	15·52	40·26	27·35	15·70
May ... ..	43·55	13·37	17·03	31·40	26·79	17·89
June ... ..	22·51	9·69	13·61	21·77	17·85	14·32
July ... ..	70·42	15·22	17·86	25·62	26·16	20·58
August ... ..	41·59	9·87	13·64	27·68	18·97	13·64
September ... ..	45·76	12·97	14·88	26·72	22·95	17·35
October ... ..	*	15·71	18·67	81·91	26·48	12·47
November ... ..	38·88	19·28	16·19	221·21	27·45	17·11
December ... ..	30·06	14·74	12·30	109·83	32·52	9·03
TOTALS ... ..	442·42	130·31	184·05	706·81	311·19	180·54
Averages ... ..	40·22	13·03	15·34	58·90	25·93	15·04

\* Records not available.

*Sulphur Determination.*—Daily records for determining the quantity of sulphur in the atmosphere were taken by the lead peroxide method at ten stations. The daily averages of the number of milligrammes of sulphur per 100 square centimetres of surface area, as recorded during the five years 1945-49, at seven stations, were as follows :—

**TABLE XIX.**—*Sulphur determination by the Lead Peroxide method at seven Sheffield Stations, five years : 1945-49.*

Year	DAILY AVERAGE MILLIGRAMMES PER 100 SQUARE CENTIMETERS.						
	Attercliffe	Bessemer Road	Crimicar Lane	Firth Park	Surrey Street	Wincobank	Weston Park
1945 ... ..	4·83	*	1·27	2·52	2·79	3·36	*
1946 ... ..	5·46	*	1·25	2·88	3·41	4·00	*
1947 ... ..	4·61	10·12	1·31	2·80	3·40	4·02	*
1948 ... ..	5·32	16·76	1·23	3·83	3·47	4·59	2·21
1949 ... ..	4·89	15·22	1·14	2·96	3·05	4·16	2·04

\* Records not available.



The daily averages of the number of milligrammes of sulphur per 100 square centimetres of surface area recorded in 1949 were as follows :—

**TABLE XX.**—*Sulphur determination by the Lead Peroxide Method at the ten Sheffield stations during the year 1949.*

MILLIGRAMMES PER 100 SQUARE CENTIMETRES PER DAY.

Month	Atter-cliffe	Bessemer Road	Crimicar Lane	Firth Park	Surrey Street	Weston Park	Jordan Locks	Wincobank Sewage Works	Tinsley	Wincobank
January ...	6.69	18.07	1.13	3.49	3.99	2.75	—	5.84	—	—
February ...	5.85	15.43	1.50	4.08	3.91	2.76	—	7.44	—	—
March ...	5.94	16.61	1.94	3.68	4.97	3.26	—	3.39	—	—
April ...	4.82	18.37	0.89	2.69	2.41	1.52	—	5.52	—	—
May ...	4.61	12.70	1.19	2.56	2.60	1.75	*2.02	2.81	*2.59	*2.94
June ...	3.16	12.14	0.93	2.11	1.95	1.35	1.59	2.38	1.94	2.52
July ...	3.75	12.44	0.83	1.85	2.01	1.33	1.21	2.24	2.30	2.21
August ...	3.71	16.13	0.84	1.92	1.93	1.28	1.55	†	2.92	2.59
September ...	3.64	20.18	1.07	2.19	2.05	1.50	2.06	1.41	2.80	2.35
October ...	4.93	15.31	0.97	3.46	2.76	1.92	3.35	4.57	4.16	4.63
November ...	5.79	15.81	1.39	4.20	4.53	2.88	3.71	4.38	5.14	5.22
December ...	5.89	9.42	0.98	3.33	3.47	2.15	3.76	5.76	5.56	5.03
TOTALS ...	58.78	182.61	13.66	35.56	36.58	24.45	19.25	45.74	27.41	27.49
Averages ...	4.89	15.22	1.14	2.96	3.05	2.04	2.41	4.16	3.43	3.44

\* Gauges installed May, 1949.

† Record not available.

Additional records by the volumetric method were taken at Surrey Street Station and these showed, for the year 1949, a daily average of 0.15 parts of sulphur per million parts of the atmosphere.

The records relating to the year under review are significant because, owing to the drive for export, the steelworks were all working at maximum output, and the condition of the atmosphere suffered in consequence. The pollution figures at Attercliffe and Surrey Street showed an increase on the previous year, whereas a slight decrease was recorded at Crimicar Lane.

**Industrial Pollution.**—Complaints were made to the City Council, by the residents of Tinsley, of nuisance caused by dust and fumes from the electricity power station at Blackburn Meadows. This matter was fully discussed with the British Electricity Authority, both as regards the present position and future policy. Remedial work on certain existing chimneys will be carried out as soon as possible.

Since these boiler chimneys, which are fourteen in number, were erected, three large cooling towers, which are about forty feet higher than the boiler chimneys, have been installed, with the result that nuisance from sulphur and grit deposit occurs.

Three additional sulphur gauges were installed in order to ascertain what was taking place, and it was also noted that, during the months of October, November and December, abnormal deposits of solid matter were recorded. This was caused by the heavy stock of “opencast fuel” becoming overheated and spontaneous combustion taking place. As soon as this fuel was disposed of, conditions returned to normal.

A new method of melting and refining steel, which is being carried out by oxygen enrichment of the air blast, has been causing an amount of dust nuisance in one district during the year. There has been some difficulty in getting information with regard to the size of the dust particles, in order to carry out efficient arrestment work. The matter was referred to the Fuel Research Department of the University of Sheffield, and it is now hoped that assistance will be provided in order to obviate this nuisance.

Records show that heavy concentrations of sulphur are discharged to the atmosphere in the Attercliffe district, and representations were made to the Ministry of Health with regard to these emissions. It does appear that some revision of the existing standard of four grains per cubic foot is necessary for such chemical effluents as these, if the atmosphere is to be kept reasonably wholesome and clean.

Many complaints were made of emissions of abrasive dust from industrial effluents where, on investigation, it was found that there were either no arrestment appliances or else inefficient ones were installed. This form of nuisance can become a greater menace to the health of the community than smoke or fumes, because this abrasive dust also contains fine particles of steel.

**Research Work.**—Under the direction of Professor R. J. Sarjant, O.B.E., research work, which had been discontinued during the war period, was resumed at the University of Sheffield and a special team of research chemists are investigating the possibility of the extended use of bituminous coal for low-temperature heat-treatment furnaces. This has always been one of the difficulties to overcome in steel manufacture, and the report on this work should be of particular interest to many manufacturers in the city.

The Committee paid a visit to the University at the end of the year, and were shown the various problems that were being investigated by the Fuel Research Department.

**Domestic Smoke.**—There are approximately 150,000 houses in Sheffield, and most of them have at least one open fire burning bituminous coal, so that the problem of reducing pollution from this source is one that must be considered.

In November, 1948, the Ministry of Health requested all Local Authorities to ensure that all future fireplaces to be installed should be of a type approved by the Ministry. This policy was supported by the Smoke Abatement Committee and, though at first there was some doubt about obtaining delivery of the approved type of ranges requested, the Housing Department have stated that, in future, these approved ranges will be installed in all new houses.

This will not show any immediate reduction in pollution, but, as a long term policy, it will help to reduce the pollution caused in residential areas.

**Town Planning and Prior Approval.**—This work, which was introduced in June, 1946, was continued, but certain difficulties arose, due to the increased demand by industry for gas and electricity, which caused the undertakings concerned to have to refuse supplies for certain premises in the central and residential areas. This is only a temporary shortage which, it is hoped, will be overcome by the end of 1951. In order to overcome the difficulty, it was agreed to grant the provisional use of solid fuel for certain premises in the central and residential areas for a period of five years, after which the situation can again be reviewed.

During the year, over 700 plans were examined and the necessary types of fuel burning appliances were agreed upon.

**Instructional Work.**—Efficiency classes for boiler-firemen and furnacemen, which are held at the University during the winter months, were continued and a much better response was obtained, over 50 candidates attending the course. It is hoped that this revival will continue, for this is an essential work that can help to a large extent in preventing the pollution of the atmosphere.

It was noted that the majority of the candidates were young men with a reasonable educational background.



## HOUSING

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It has been stated in earlier Reports that the progress of the Slum Clearance Scheme was halted upon the outbreak of War in 1939, in accordance with the directions of the Ministry of Health. Certain information is recorded, however, in regard to the demolition of dwelling-houses which took place in the year 1949—these being mostly condemned houses, the demolition of which had been delayed owing to the general housing shortage, but which had become in such a dangerous state, structurally, as to render their demolition an urgent matter. The last of the rehousing of displaced tenants under the Slum Clearance Scheme proper was in the year 1940, although in the year under review there were a few families who were transferred to houses on Corporation Estates from houses which had been scheduled for demolition prior to the War.

**Demolition of Houses.**—57 houses which were in Slum Clearance Areas were demolished or rendered unusable as dwelling-houses in the year 1949, the great majority being demolished, but a few converted into industrial premises. In addition, there were three houses converted into business premises in pursuance of action taken prior to the War, for dealing with individual unfit houses under the Housing Acts.

**Overcrowding.**—The alleviation of overcrowding in any very considerable degree was rendered impracticable by the suspension of building operations shortly after the outbreak of war, and it is still too early for the building now in progress to have any great effect upon the position. As regards Part IV of the Housing Act, 1936, there were 122 cases of overcrowding relieved during the year 1949, and 163 new cases were reported. At the end of the year, there were 4,515 families known to be living under overcrowded conditions in the City, and the total number of persons in these families, that is the equivalent number of persons under the Act, was 25,552½.

**Erection of Dwelling-Houses.**—The City Engineer has furnished information relating to the building of dwelling-houses in the City.

735 new dwelling-houses were erected during the year 1949, and in addition to this figure, 26 additional housing units were provided by the conversion of existing buildings into flats. The corresponding figures for the year 1948 were : 813 new dwelling-houses erected and 87 additional housing units provided.

The approximate total number of houses on the Rate Books at 31st December, 1949, was 151,405.

**Inspection of Dwelling-houses.**—All inspections of dwelling-houses for housing defects, under the Public Health or Housing Acts, are made by the staff of Sanitary Inspectors and 15,024 houses were inspected during the year 1949. 12,161 houses, at which there had been defects, were rendered fit during the year as a result of informal action taken by the Department. Notices were served under the Public Health Act, 1936, as regards 8,064 houses, requiring defects to be remedied.

**Tables of Housing Statistics.**—As a conclusion to this section of the Report there are given certain tables of Housing Statistics. These are Table XXI, being general statistics in regard to Housing, and Tables XXII and XXIII which relate to action which was taken under the Housing Acts in 1949 and, in past years, in regard to unfit houses in clearance areas and individual unfit houses respectively. Although there has been comparatively little to add to these tables since 1939, they are reprinted in order to preserve the continuity of the Housing records.

TABLE XXI.—*Housing Statistics of the year 1949.*

1. Inspection of Dwelling-houses during the year :—	
(1) (a) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts) .. .. .	15,024
(b) Number of Inspections made for the purpose .. .. .	*9,343
(2) (a) Number of dwelling-houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925 and 1932 .. .. .	—
(b) Number of Inspections made for the purpose .. .. .	—
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation .. .. .	—
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation .. .. .	—
2. Remedy of defects during the year without service of formal notices :—	
Number of defective dwelling-houses rendered fit in consequence of informal action by the local authority or their officers .. .. .	12,161
3. Action under Statutory Powers during the year :—	
(a) Proceedings under Sections 9, 10 and 16 of the Housing Act, 1936 :—	
(1) Number of dwelling-houses in respect of which notices were served requiring repairs .. .. .	—
(2) Number of dwelling-houses which were rendered fit after service of formal notices :—	
(a) By owners .. .. .	—
(b) By local authority in default of owners .. .. .	—
(b) Proceedings under Public Health Acts :—	
(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied .. .. .	8,064
(2) Number of dwelling-houses in which defects were remedied after service of formal notices :—	
(a) By owners .. .. .	3,040
(b) By local authority in default of owners .. .. .	—
(c) Proceedings under Sections 11 and 13 of the Housing Act, 1936 :—	
(1) Number of dwelling-houses in respect of which Demolition Orders were made .. .. .	—
(2) Number of dwelling-houses demolished in pursuance of Demolition Orders .. .. .	—
(d) Proceedings under Section 12 of the Housing Act, 1936 :—	
(1) Number of separate tenements or underground rooms in respect of which Closing Orders were made .. .. .	—
(2) Number of separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit .. .. .	—
4. Housing Act, 1936—Part IV—Overcrowding :—	
(a) (i) Number of dwellings overcrowded at the end of the year .. .. .	4,475
(ii) Number of families dwelling therein .. .. .	4,515
(iii) Number of persons dwelling therein (equivalent No.) .. .. .	25,552½
(b) Number of new cases of overcrowding reported during the year .. .. .	163
(c) (i) Number of cases of overcrowding relieved during the year .. .. .	122
(ii) Number of persons concerned in such cases (equivalent No.) .. .. .	439½
(d) Particulars of any cases in which dwelling-houses have again become overcrowded after the local authority have taken steps for the abatement of overcrowding .. .. .	—

\* A proportion of these inspections relates to visits to blocks of houses affected by nuisances.



TABLE XXII.—Housing Acts, 1930 and 1936.—Clearance Areas. Summary of Work Done.

YEAR	OFFICIAL REPRESENTATIONS MADE BY THE MEDICAL OFFICER OF HEALTH		PUBLIC INQUIRIES HELD BY MINISTRY OF HEALTH'S INSPECTORS								VACATION OF HOUSES AND RE-HOUSING OF DISPLACED TENANTS				No. of Houses Demolished or Abolished
	No. of Areas involved	No. of Houses involved	No. of Areas for which Inquiries were held	Total No. of Houses involved	No. of Houses for which Orders were confirmed	No. of Houses changed from " Pink " to " Grey " on plan	No. of Houses Excluded from Orders	No. of Houses purchased by Corpor- ation for Demolition and for which Orders were rescinded	No. of Houses vacant when Orders made	No. of Houses from which displaced tenants were re-housed by the Corpora- tion	No. of Houses from which tenants found their own Accom- modation	Total No. of Houses vacated			
1930 (from 1st October)....	17	394	—	—	—	—	—	—	—	—	—	—	—		
1931 ... ..	—	—	17	394	290	3	18	83	12	—	—	12	—		
1932 ... ..	7	435	7	435	—	—	—	—	5	298	32	335	88		
1933 ... ..	16	906	10	635	593	—	35	—	5	254	8	267	377		
1934 ... ..	67	3238	34	1636	1439	4	32	—	16	899	98	1013	857		
1935 ... ..	93	4558	67	3401	2437	19	38	—	17	764	23	804	776		
1936 ... ..	67	3239	65	3030	3730	2	86	—	40	1311	81	1432	1109		
1937 ... ..	125	5378	66	3232	2676	7	26	7	39	2087	136	2262	2101		
1938 ... ..	166	3908	40	3174	3995	4	32	—	41	2051	176	2268	2456		
1939 ... ..	65	752	105	2372	1207	6	15	—	45	1808	122	1975	1677		
1940 ... ..	—	—	—	—	—	—	—	—	—	469	24	493	195		
1941 ... ..	—	—	—	—	—	—	—	—	—	—	873	873	591		
1942 ... ..	—	—	—	—	—	—	—	—	—	—	—	—	291		
1943 ... ..	—	—	—	—	—	—	—	—	—	—	—	—	67		
1944 ... ..	—	—	—	—	—	—	—	—	—	—	—	—	144		
1945 ... ..	—	—	—	—	—	—	—	—	—	—	—	—	349		
1946 ... ..	—	—	—	—	—	—	—	—	—	18	—	18	103		
1947 ... ..	—	—	—	—	—	—	—	—	—	36	—	36	53		
1948 ... ..	—	—	—	—	—	—	—	—	—	36	—	36	91		
1949 ... ..	—	—	—	—	—	—	—	—	—	29*	3	32	57		
TOTALS ... ..	623	22808	411	18309	16367	45	282	90	220	10060	1576	11856	11382		

NOTES : (1)—The Minister of Health's decision had not been received at the year end with regard to 39 areas for which Public Inquiries had been held. These involved 1,529 houses.  
(2)—Public Inquiries had not been held by the end of the year in the case of 210 areas for which Official Representations had been made by the Medical Officer of Health. These involved 4,477 houses.  
(3)—The number of houses for which Orders had been confirmed by the Minister of Health and the tenants of which were awaiting re-housing on 31st December, 1949, was 4,528.  
(4)—\* Includes tenants from 17 houses in Clearance Areas in respect of which Ministry of Health Confirmatory Orders had not been received.

TABLE XXIII.—Housing Act, 1930—Section 19 } Individual Unfit Houses. Summary of Work Done.  
Housing Act, 1936—Section 11 }

YEAR	OFFICIAL REPRESENTATIONS MADE BY THE MEDICAL OFFICER OF HEALTH					VACATION OF HOUSES AND REHOUSING OF DISPLACED PERSONS				NUMBER OF HOUSES ABOLISHED OR DEMOLISHED				REMARKS
	No. of Properties involved	No. of Houses involved	No. of Houses for which Representations withdrawn	No. of Houses for which Demolition Orders made	No. of Houses for which Schemes accepted for converting to Works, etc.	No. of Houses from which Tenants have been rehoused by the Corporation	No. of Houses from which Tenants have found own Accommodation	No. of Houses which were Vacant when Orders made or Schemes Accepted	Total No. of Houses Vacated	For which Schemes Completed for converting to Works, etc.	In compliance with Demolition Orders	After Representation but without Demolition Order being made	TOTAL	
1930 (From 1st October only)	17	48	9	—	—	—	—	—	—	—	—	—	—	—
1931 ...	47	230	1	206	21	—	1	—	1	—	—	—	—	—
1932 ...	13	52	—	52	6	110	52	6	168	7	98	7	7	112
1933 ...	25	95	—	77	15	101	21	2	124	1	89	1	—	90
1934 ...	49	151	2	98	28	100	24	5	129	23	154	10	10	187
1935 ...	63	177	3	87	43	150	13	7	170	36	124	—	—	160
1936 ...	57	398	3	335	58	162	13	15	190	32	74	1	1	107
1937 ...	50	399	—	312	39	247	34	9	290	28	122	—	—	150
1938 ...	37	427	—	134	38	351	19	14	384	21	354	—	—	375
1939 ...	15	56	1	427	11	399	16	5	420	6	616	4	4	626
1940 ...	1	12	—	12	—	17	3	—	20	5	18	3	3	26
1941 ...	—	—	—	—	—	20	17	—	37	1	4	—	—	5
1942 ...	—	—	—	—	—	—	—	—	—	2	2	—	—	4
1943 ...	—	—	—	—	—	—	—	—	—	3	5	—	—	8
1944 ...	—	—	—	—	—	—	—	—	—	—	4	—	—	4
1945 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1946 ...	—	—	—	—	—	1	—	—	1	32	4	—	—	36
1947 ...	—	—	—	—	—	—	—	—	—	4	5	—	—	9
1948 ...	1	1	—	1	—	1	—	1	2	3	2	—	—	5
1949 ...	—	—	—	—	—	—	—	—	—	—	3	—	—	3
TOTALS ...	375	2046	19	1741	259	1659	213	64	1936	204	1678	25	25	1907

NOTES : (1)—There were 61 houses for which Demolition Orders had been issued, where the tenants still remained in occupation at 31st December, 1949, and a further 28 where schemes had been approved, but were awaiting carrying out, for the converting of the houses into works or other business premises and the tenants still remained in occupation at the end of 1949.

(2)—Since the inception of the scheme, there have been two instances where Demolition Orders have been quashed upon appeal to the County Court by the owners.



FOOD AND DRUGS

GENERAL FOOD INSPECTION.

Food supplies at wholesale fish and fruit markets, wholesale and retail provision and food stores, retail markets and railway stations were inspected regularly during the year. Full use was made of the Kitchen Waste Plant of the Cleansing Department and the Meat Digester Plant of the Markets Department, and all condemned food which was found to be suitable for treating by either of these plants was so treated. The remaining condemned food was removed to the Corporation Destructor and destroyed. Close supervision was exercised over the 14 shops which retailed horseflesh in the City. All the horseflesh sold in the City had been slaughtered at approved registered horse slaughterhouses and had been passed as fit for human consumption.

During the year, the Food Inspectors made 8,585 visits to markets, railways and wholesale food stores, 1,361 visits to retail food shops, and 662 visits to horseflesh shops; they also inspected 562 pigs, which were slaughtered at private premises for consumption by their owners. Details in regard to these inspections are as follows :—

Home Slaughtered Pigs.

Number inspected	Number passed fit	Weight of meat and offal condemned and surrendered		
		Cwts.	Qrs.	lbs.
562	496	8	1	20½

TABLE XXIV.—General Food Inspection—Food condemned as unfit for human consumption, during year 1949.

Description	Quantity	Tons	Cwts.	Qrs.	Lbs.	Description	Quantity	Tons	Cwts.	Qrs.	Lbs.
Canned Goods ...	153,443	—	—	—	—	Horseflesh and					
Apple Puree ...	103 jars	—	—	—	—	Offal ...	—	—	4	—	6
Bacon and Ham	—	1	12	3	18	Locust ...	—	—	12	2	—
Biscuits ...	—	—	1	2	18	Margarine ...	—	—	—	—	¼
Bread ...	—	—	10	3	1	Meat Extract ...	—	—	—	—	10¾
Butter ...	—	—	—	—	¼	Meat and Fish					
Cakes and Pastry	—	—	2	1	11	Paste ...	69 jars	—	—	—	—
Carrot Powder ...	—	—	1	3	14	Meat and Meat					
Cereals ...	—	1	2	1	21	Products ...	—	5	12	2	—
Cheese ...	—	—	9	3	20	Meat Pies ...	78	—	—	—	—
Cocoa ...	—	—	—	—	3¼	Milk, Condensed					
Cocoa Butter ...	—	—	—	—	10	(Skimmed) ...	—	—	16	—	23
Coffee Essence ...	225 bottles	—	—	—	—	Milk (Dried) ...	—	—	—	2	17
Coffee ...	—	—	—	—	½	Peas (Dried) ...	—	—	—	3	17
Cooking Fat ...	—	—	—	—	¼	Pickles and Sauces	13,485 jars	—	—	—	—
Cooking Fat						Poultry and Game	—	—	15	1	26
(Sweetened) ...	—	3	10	2	16	Preserves ...	—	1	16	3	18
Desiccated Co'nut	—	1	6	2	22	Puddings					
Dripping ...	—	—	1	2	5	(Steamed) ...	—	—	—	3	19
Eggs ...	72	—	—	—	—	Rabbits ...	—	5	10	2	7
Eggs (Dried) ...	—	—	—	—	6	Sandwich Spread	581 jars	—	—	—	—
Eggs (Frozen) ...	—	—	—	3	—	Shellfish ...	{	8	16	1	19
Fish ...	—	36	5	1	14		773 jars	—	—	—	—
Fishcakes ...	49	—	—	—	—	Sugar ...	—	1	1	—	8½
Flavouring						Sweet					
Matters ...	40 bottles	—	—	—	—	Confectionery	—	—	3	1	16
Flour ...	—	3	2	1	7	Vegetables ...	—	4	10	1	21
Fruit ...	—	4	10	1	3	Vegetable Sausage	—	—	1	3	18
Fruit (Dried) ...	—	—	7	1	12	Sundry Articles ...	28	—	—	—	—
Fruit Cordial ...	13 bottles	—	—	—	—						

THE MILK SUPPLY.

The daily average consumption of milk in Sheffield during the year 1949 was 43,026 gallons, which represents 0·67 pints per head of population. These 43,026 gallons consisted of 3,627 gallons produced in the City and 39,399 gallons brought into the City from outside areas. The minimum standard for genuine milk, as laid down by the Sale of Milk Regulations, 1939, is 3 per cent. of milk fat and 8·5 per cent. of milk solids other than milk fat. During the year, the average quality of the 900 samples of milk procured in the City under the Food and Drugs Act, 1938, was 3·53 per cent. milk fat and 8·66 per cent. milk solids other than milk fat.

It will be of interest to relate briefly the various steps taken by the Inspectorate of the Food and Drugs Section to control and safeguard the City's milk supply. Statistical details of this work are given in the report of this Section's work. To ensure that the chemical quality of the milk sold in the City is up to standard, samples are taken daily from milk vendors as they deliver milk to the consumers' homes. When such milk samples prove to be adulterated, either by the addition of water or by the abstraction or deficiency of milk fat, legal action is taken against the vendor. Milk samples are also taken for bacteriological examination to determine whether milk is infected with disease; if milk has been pasteurised or sterilised, that is to say adequately treated with heat to destroy pathogenic organisms, routine samples

are taken at frequent intervals to make sure that such milks have been processed in an efficient manner. All milks of special designation, namely: Pasteurised Milk, Tuberculin Tested Pasteurised Milk, Sterilised Milk, Tuberculin Tested Milk and Accredited Milk, are sold subject to licence and must comply with the requirements of the Milk (Special Designation) Orders, and numerous samples are taken to ensure the purity of these milks.

An important step forward in milk legislation was the coming into operation of the Milk and Dairies Regulations, 1949, on October 1st, 1949. These enactments gave Food and Drugs Authorities the power to require milk, suspected of containing the organisms of the tubercle bacillus, to be pasteurised. Sheffield took action under these regulations on four occasions during the period October 1st, 1949 to December 31st, 1949.

FOOD AND DRUGS ACT, 1938.

It will be seen from the table which follows that, of the 1,183 formal and informal samples of milk and other food commodities which were taken during the year, there were 144, or 12·17 per cent., which proved to be unsatisfactory.

TABLE XXV.—Results of analyses of samples taken under the Food and Drugs Act, 1938, during the year 1949.

Articles	Total Samples Submitted	Formal Samples		Informal Samples	
		Satisfactory	Unsatis- factory	Satisfactory	Unsatis- factory
Milk ... ..	900	547	68	254	31
Baking Powder ... ..	6	—	—	6	—
Brisling (Canned) ... ..	1	—	—	1	—
Butter ... ..	8	—	—	8	—
Coffee and Chicory Essence ... ..	1	—	—	1	—
Cooking Fat ... ..	9	—	—	9	—
Dripping ... ..	1	—	—	—	1
Egg (Dried) ... ..	1	—	—	1	—
Fat Extender Compound ... ..	1	—	—	1	—
Glacé Cherries ... ..	1	—	—	1	—
Ice Cream ... ..	73	—	—	66	7
Jellies ... ..	1	—	—	—	1
Meat Products ... ..	13	4	1	7	1
Margarine ... ..	9	—	—	9	—
Milk (Dried) ... ..	1	—	—	1	—
Milk (Skimmed) ... ..	1	1	—	—	—
Parsley (Dried) ... ..	1	—	—	1	—
Pastries ... ..	21	—	1	17	3
Pastry Ingredients ... ..	6	—	—	5	1
Peppers and Spices ... ..	13	—	—	12	1
Pears ... ..	4	—	—	4	—
Pickles and Sauces ... ..	2	—	—	2	—
Rum ... ..	1	—	—	1	—
Sausages ... ..	47	34	10	1	2
Sausage Meat ... ..	30	17	11	2	—
Saccharin Tablets ... ..	6	—	—	6	—
Self-Raising Flour ... ..	6	—	—	6	—
Sweet Confectionery ... ..	3	—	—	3	—
Sago ... ..	1	—	—	1	—
Soup (Canned) ... ..	1	—	—	—	1
Tomatoes (Tinned) ... ..	1	—	—	1	—
Tomato Paste (Tinned) ... ..	1	—	—	—	1
Tea-Saving Tablets ... ..	1	—	—	—	1
Vegetable Sausage ... ..	1	—	—	—	1
Vinegar (Malt) ... ..	2	1	—	1	—
Vinegar (Non-brewed) ... ..	8	7	1	—	—
TOTALS ... ..	1,183	611	92	428	52

The following statement gives particulars of the analysis of samples taken under the Food and Drugs Act, 1938, in the years 1939 to 1949 and shows, in regard to each year, the number of samples analysed and the number and percentage of the samples which were found to be unsatisfactory.

Year	Total samples submitted	Unsatisfactory	Percentage unsatisfactory
1939	1,264	56	4·43
1940	1,082	97	8·96
1941	1,064	117	10·98
1942	1,337	117	8·75
1943	1,228	117	9·53
1944	1,370	129	9·42
1945	1,341	97	7·23
1946	1,314	72	5·48
1947	827	71	8·59
1948	741	50	6·75
1949	1,183	144	12·17



The decrease in the numbers of samples taken in the years 1947 and 1948 is due to the fact that the staff of Food and Drugs Inspectors was depleted owing to the difficulty in replacing qualified staff who left the service.

**Legal Proceedings.**—The results of legal proceedings which were taken during the year for offences against the Food and Drugs Act, 1938, and which resulted in penalties totalling £106 13s. 0d. being imposed, are given in the following statement :—

Offences	Penalties imposed		
	£	s.	d.
Selling milk containing added water (two cases)—(total fines) ..	4	0	0
Selling pastry containing mineral oil (one case) .. .. .	11	1	0
Selling sausages deficient in meat content (twelve cases)—(total fines)	86	7	0
Selling unfit food (one case) .. .. .	5	5	0
TOTAL .. .. .	£106	13	0

The prosecution taken against a firm of bakers for selling unfit food was in respect of a loaf of bread containing a cigarette-end.

In addition to cases taken to prosecution, official warnings were also given in : twelve cases of milk fat deficiency, one case of milk containing a small amount of added water, seven cases of sausages slightly deficient in meat content, one case of meat paste slightly deficient in meat content, one case of liver sausage meat containing a preservative, and two cases of non-brewed vinegar deficient in acetic acid content.

In the case of a sample of “tea-saving” tablets, which were labelled misleadingly—in that it was claimed that they saved tea and were equivalent to tea—the authority, in whose area the selling agent resided, were informed and, as a result of action taken by that authority, the tablets were withdrawn from sale.

#### MILK AND DAIRIES REGULATIONS.

**The Presence of Tubercle Bacilli in Milk.**—In the table which follows, will be found particulars relating to the 661 bulk samples of raw milk which were taken during the year in order that the biological test might be applied. Tubercle bacilli proved to be present in 55, or 8·32 per cent., of the samples.

**TABLE XXVI.**—*Results of Biological Tests of Bulk samples of Milk taken during the year 1949.*

Source of Sample	No. of milk samples taken	Results of tests		Percentage tuberculous	No. of cows slaughtered
		Free	Tuberculous		
City of Sheffield .. ..	190	174	16	8·42	*13
Yorkshire West Riding .. ..	304	279	25	8·22	15
Derbyshire .. ..	167	153	14	8·32	11
Totals .. ..	661	606	55	8·32	39

\* In addition to these 13 cows, which were from Sheffield farms and were subsequently slaughtered as a result of the initial action in taking bulk samples of milk, there were seven cows which were from Sheffield farms and were slaughtered under the provisions of the Tuberculosis Order, 1938, upon being found by Inspectors of the Ministry of Agriculture and Fisheries to be in a tuberculous condition.

**Pasteurised Milk.**—86 samples of pasteurised milk were subjected to the biological test for the presence of tubercle bacilli. All these samples gave negative results.

**Milk and Dairies Regulations, 1949.**—Regulation 20 of these regulations (which became operative on October 1st, 1949), empowers the Medical Officer of Health, when he suspects milk to be tuberculous, to prohibit, by notice, the sale of such milk, unless it has been pasteurised or sterilised. Any person upon whom such a notice is served is entitled to reasonable compensation from the local authority for any financial loss he incurs because of the notice. 75 per cent. of the cost of compensation is recoverable by the Local Authority from the Ministry of Health. During 1949, four notices under Regulation 20 were served, and £151 16s. 8d. was paid in compensation.

Incidence of Non-Pulmonary Tuberculosis, compared with the Increase in the Sale of Pasteurised Milk.—The following chart and table show the incidence of cases of non-pulmonary tuberculosis in Sheffield for the years 1931 to 1948, and also give the increase of the sale of pasteurised milk in the City during those years. The death rates from non-pulmonary tuberculosis are also shown.

## NON-PULMONARY TUBERCULOSIS

RATE PER 1,000 OF POPULATION

NOTIFICATIONS

DEATHS

## PASTEURISED MILK

PERCENTAGE OF TOTAL MILK SUPPLY

RISE FROM 27% TO 90%

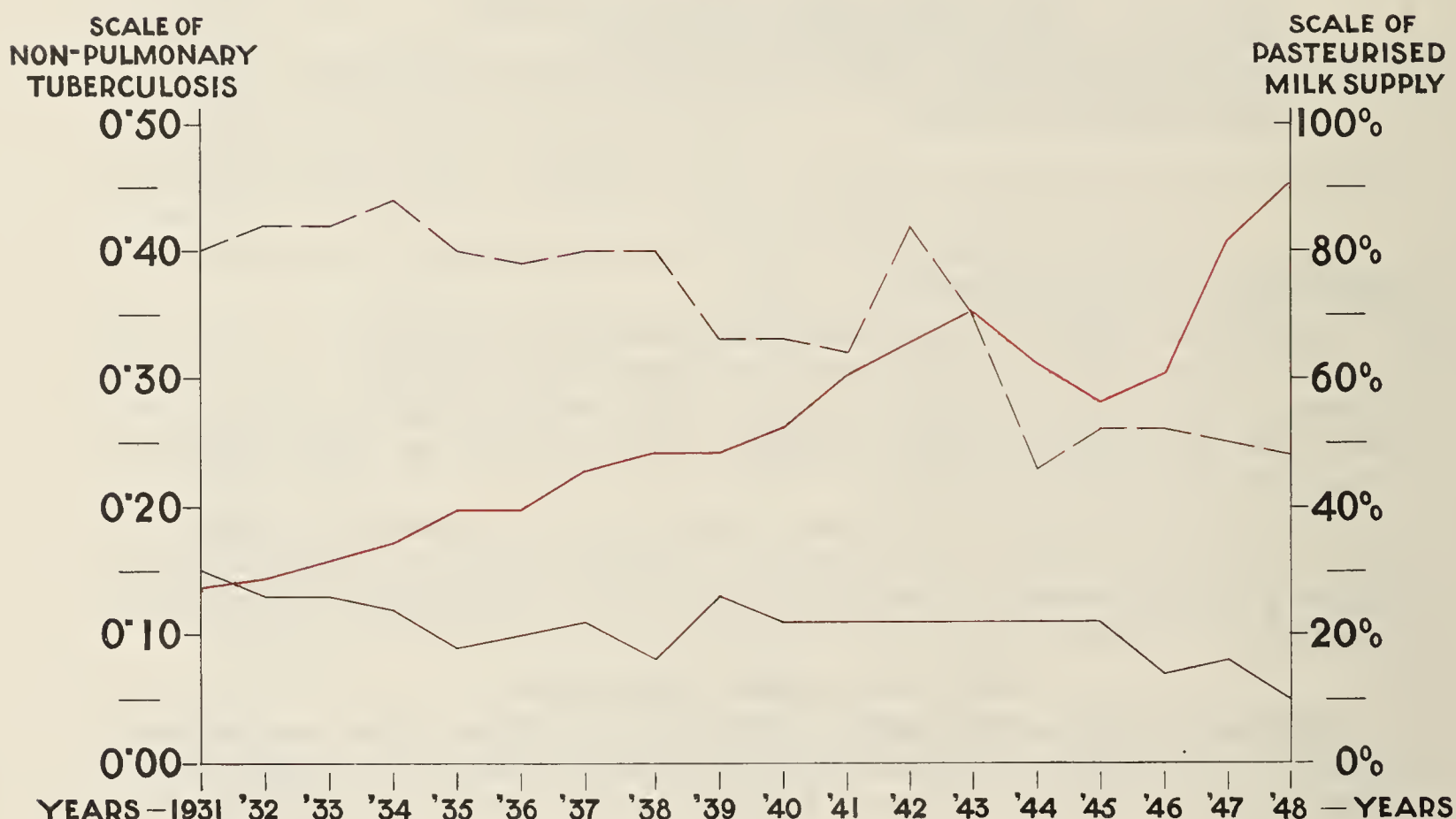


TABLE XXVII.—Comparison of the Notification Rates and Death Rates of Non-Pulmonary Tuberculosis with the increase in the consumption of Pasteurised Milk.

Year	Population	CASES OF NON-PULMONARY TUBERCULOSIS				MILK SUPPLY			
		Notified Cases	Notified incidence per 1,000 of population	Number of Deaths	Death Rate per 1,000 population	Total daily consumption in gallons	Daily consumption (in pints) per head of population	Total daily gallonage of pasteurised milk	Percentage of pasteurised milk
1931	511,742	207	0.40	75	0.15	22,303	0.34	5,983	27
1932	513,000	217	0.42	66	0.13	24,149	0.37	6,704	28
1933	511,820	217	0.42	67	0.13	24,281	0.38	7,670	31
1934	520,950	230	0.44	60	0.12	25,065	0.38	8,454	34
1935	520,500	209	0.40	49	0.09	24,922	0.38	9,690	39
1936	518,200	203	0.39	52	0.10	25,094	0.39	9,800	39
1937	518,200	207	0.40	59	0.11	26,424	0.41	11,973	45
1938	520,000	208	0.40	43	0.08	27,833	0.43	13,493	48
1939	517,100	172	0.33	68	0.13	27,988	0.43	13,555	48
1940	496,700	165	0.33	52	0.11	28,000	0.45	14,643	52
1941	483,320	154	0.32	53	0.11	28,000	0.46	16,870	60
1942	479,400	200	0.42	51	0.11	27,630	0.46	18,023	65
1943	474,100	164	0.35	54	0.11	28,580	0.48	20,049	70
1944	474,180	111	0.23	53	0.11	38,904	0.66	24,000	62
1945	476,360	122	0.26	51	0.11	38,904	0.65	21,925	56
1946	500,400	128	0.26	33	0.07	38,042	0.61	22,857	60
1947	508,370	127	0.25	40	0.08	39,168	0.62	31,803	81
1948	514,400	121	0.24	28	0.05	42,000	0.65	37,780	90

### Explanatory Note.

It will be observed that, in the years : 1944, 1945 and 1946, the percentage of the pasteurised milk sold was slightly less than in the two previous years. A reason for this was that the total amount of milk consumed daily increased by 10,000 gallons, due to the introduction of the Ministry of Food's Milk Priorities Scheme and, at that time, it was not possible for a consumer to change his milk supplier. By 1947, the upward trend in the sales of pasteurised milk had been resumed.



**Production of Clean Milk.**—During the year, 190 samples were taken of raw milk which had been produced within the City. 96 samples, or 50·53 per cent., were free from *Bacillus Coli* in 1/100th of a millilitre.

**Milk (Special Designation) Regulations.**—Particulars are given below regarding the various types of designated milk retailed in the City.

**TUBERCULIN TESTED (CERTIFIED).**—An average of approximately 155 gallons of this milk was sold in the City daily during the year. Three City farms produced 102 gallons, and 53 gallons were brought in from two farms outside Sheffield.

**ACCREDITED MILK.**—The average daily sale of Accredited Milk in the City during the year was approximately 388 gallons. 358 gallons were produced on six City farms, and 30 gallons at one farm outside Sheffield.

**PASTEURISED MILK.**—Four firms are licensed for the pasteurising of milk in Sheffield and, in addition, three firms whose pasteurising dairies are outside the City sell pasteurised milk within the City. The daily average total sale of this milk in 1949 was 35,186 gallons, which represents 81·08 per cent. of the total supply of milk to the City.

**TUBERCULIN TESTED MILK (PASTEURISED).**—Two firms sell this milk in Sheffield, one firm having premises in the City and the other firm supplying Sheffield from an adjacent area. The daily average sale of this milk in 1949 was 3,100 gallons, or 7·20 per cent. of the City's milk consumption.

**STERILISED MILK.**—Three firms sold 2,090 gallons of sterilised milk daily in the City, in 1949. One of these firms occupies premises in Sheffield.

In addition to the above designated milks, 200 gallons of heat-treated milk were sold daily in the City.

It will be observed from the foregoing information regarding the sale of pasteurised milk, tuberculin tested milk (pasteurised), sterilised milk and other heat-treated milk, that a total of 40,576 gallons, representing 94·31 per cent. of the milk supply of the City in 1949, had either been pasteurised or had undergone some other form of heat-treatment.

*Bacteriological Examinations of Milk.*—Details of the various tests which were applied to Designated and Non-Designated Milk during the year are given in the following statement :—

Description of milk	Nature of test	No. of samples tested	No. of samples which were satisfactory
Tuberculin Tested Milk .. .. .	Methylene Blue	10	9
„ „ „ .. .. .	Bacillus Coli	3	3
Tuberculin Tested Milk (Certified) ..	Methylene Blue	34	31
„ „ „ .. .. .	Bacillus Coli	11	11
Accredited Milk .. .. .	Methylene Blue	48	42
„ „ „ .. .. .	Bacillus Coli	14	10
Pasteurised Milk .. .. .	Methylene Blue	293	290
„ „ „ .. .. .	Phosphatase	281	281
„ „ „ .. .. .	Bacterial Count	294	265
„ „ „ .. .. .	Bacillus Coli	296	*222
Tuberculin Tested Milk (Pasteurised) ..	Methylene Blue	55	54
„ „ „ .. .. .	Phosphatase	54	54
„ „ „ .. .. .	Bacterial Count	55	50
„ „ „ .. .. .	Bacillus Coli	55	*47
Sterilised Milk .. .. .	Methylene Blue	9	9
„ „ „ .. .. .	Phosphatase	9	9
„ „ „ .. .. .	Bacterial Count	11	11
„ „ „ .. .. .	Bacillus Coli	11	11
„ „ „ .. .. .	Turbidity	2	2
Heat-treated Milk .. .. .	Methylene Blue	5	5
„ „ „ .. .. .	Phosphatase	5	5
„ „ „ .. .. .	Bacterial Count	5	5
„ „ „ .. .. .	Bacillus Coli	5	5

\* No *Bacillus Coli* in a millilitre of the milk.

## ICE CREAM.

## BACTERIOLOGICAL SAMPLES.

The number of samples taken in the City during 1949 was 126.

## GENERAL SUMMARY.

Methylene Blue Test			Bacterial Count Test No. of Bacteria			*Bacillus Coli Test		
Grade ONE	..	61	0—1,000	..	20	ABSENT	..	57
			1,000—10,000	..	26	Present in 1 tube	..	13
Grade TWO	..	27	10,000—50,000	..	20	Present in 2 tubes	..	7
			50,000—100,000	..	10	Present in 3 tubes	..	8
Grade THREE	..	23	100,000—500,000	..	16	Present in 4 tubes	..	6
			500,000—1,000,000	..	4	Present in 5 tubes	..	5
Grade FOUR	..	15	1,000,000 and over	..	30	Present in 6 tubes	..	30
TOTAL	..	126	TOTAL	..	126	TOTAL	..	126

\* B.Coli examination—3 tubes in each of 1/10 and 1/100 ml.

CLASSIFIED SUMMARY.

## HEAT-TREATED ICE CREAM.

Methylene Blue Test			Bacterial Count Test			Bacillus Coli Test		
			No. of Bacteria					
Grade ONE	..	50	0—1,000	..	17	ABSENT	..	48
			1,000—10,000	..	21	Present in 1 tube	..	12
Grade TWO	..	24	10,000—50,000	..	17	Present in 2 tubes	..	7
			50,000—100,000	..	9	Present in 3 tubes	..	7
Grade THREE	..	22	100,000—500,000	..	13	Present in 4 tubes	..	6
			500,000—1,000,000	..	4	Present in 5 tubes	..	4
Grade FOUR	..	14	1,000,000 and over	..	29	Present in 6 tubes	..	26
TOTAL	..	110	TOTAL	..	110	TOTAL	..	110

### COLD MIX ICE CREAM.

Methylene Blue Test			Bacterial Count Test			Bacillus Coli Test		
			No. of Bacteria					
Grade ONE	..	11	0—1,000	..	3	ABSENT	..	9
			1,000—10,000	..	5	Present in 1 tube	..	1
Grade TWO	..	3	10,000—50,000	..	3	Present in 2 tubes	..	—
			50,000—100,000	..	1	Present in 3 tubes	..	1
Grade THREE	..	1	100,000—500,000	..	3	Present in 4 tubes	..	—
			500,000—1,000,000	..	—	Present in 5 tubes	..	1
Grade FOUR	..	1	1,000,000 and over	..	1	Present in 6 tubes	..	4
TOTAL	..	16	TOTAL	..	16	TOTAL	..	16

*Explanatory Note.*—Grades ONE and TWO are considered satisfactory ; Grade THREE is classed as : “ fair, but capable of improvement ” ; Grade FOUR is unsatisfactory.

*Chemical Analysis.*—There is no legal standard for the fat content of Ice Cream at the present time, but most Food and Drugs Authorities are agreed that a minimum fat content of 5 per cent. is desirable. The Ministry of Food, in increasing the allocation of ingredients to Ice Cream manufacturers, made it a condition that persons who received the increased allocation should manufacture a product containing a minimum of  $2\frac{1}{2}$  per cent. of fat. Sheffield, in common with other Local Authorities, was asked to inform the Ministry of Food of the results of the analyses of Ice Cream samples, and this was done.

73 samples of Ice Cream were analysed during the year and the following is a summary of the fat content of these samples :—

Fat Content								Number of Samples
Below 2½ per cent.	..	..	..	..	..	..	..	7
2½ to 5 per cent.	..	..	..	..	..	..	..	37
5 to 8 per cent.	..	..	..	..	..	..	..	13
8 to 12 per cent.	..	..	..	..	..	..	..	15
Over 12 per cent.	..	..	..	..	..	..	..	1
								—
			TOTAL	..	..	..	..	73
								—



**PHARMACY AND POISONS ACT, 1933.**

Premises on Local Authority's list of persons entitled to sell poisons included				
in Part II of the Poisons List (at 31st December, 1949)	..	..	..	903
Premises added to the list of persons during the year	..	..	..	139
Number of routine visits and inspections in the year 1949	..	..	..	253

**FERTILISERS AND FEEDING STUFFS ACT, 1926.**

Six samples were taken under the above Act during the year, and all were satisfactory.

**FOOD HANDLING.**

The importance of the hygiene of food handling has always been recognised in the Public Health Department and, even prior to the passing of the Food and Drugs Act, 1938, Sheffield was actively tackling the problem of the construction and cleanliness of food preparation premises, which included : potted and preserved meat factories and ice cream dairies, and, to this end, had special legislation incorporated in a local Act. Fish friers' premises were strictly controlled, and a high standard in construction and cleanliness had been reached prior to 1939. When the Food and Drugs Act, 1938, became law, full advantage was taken of the additional powers conferred by Sections 13 and 14, but, during the war years, it was not possible to secure all the desirable constructional improvements to food premises.

When, in October, 1949, the Ministry of Food issued the new Model Byelaws for the Handling of Food, the Health Committee immediately recommended the adoption of these byelaws by the City Council and they became operative in May, 1950. These byelaws are wide in their application and will help materially in the problems of food hygiene.

Particular attention has been paid to the inspections of shops, stalls and vehicles used in the food trades, and visits are regularly made to restaurant and hotel kitchens. The Ice Cream (Heat Treatment) Regulations are being enforced, and frequent samples for bacteriological examination are taken to ensure compliance with these regulations.

It is realised that the whole problem of food hygiene is closely allied with a process of educating the staffs engaged in the food trades and also the consuming public. Every opportunity has been taken, by means of talks to the food trades and allied organisations and by press propaganda, to stress the important part that hygiene plays in food handling.

## MEAT INSPECTION

**Private Slaughterhouses.**—There are two private slaughterhouses in the City. One of these is used exclusively for the slaughter of pigs, and 1,429 pigs were slaughtered there in the year 1949. Two carcasses, 25 part carcasses, and offal, representing a weight of 756 lbs. from these pigs, were found to be unfit for human consumption and were condemned. At the other private slaughterhouse, which is the special Horse Slaughterhouse at the Corporation Abattoir, there were 2,644 horses slaughtered during the year. All were examined by the Meat Inspectors.

**Corporation Abattoir.**—The carcass of every animal which is slaughtered for food at the Corporation Abattoir is examined by a qualified meat inspector, and any carcass suspected of being diseased is taken to the Detention Room for a final inspection. Inspections are also made of the animals whilst they are in the lairages awaiting slaughter. Any which are suspected of being diseased are taken to an Isolation Slaughterhouse, where they are slaughtered and dressed in order that they may have no contact with the healthy animals. Animals slaughtered under the Tuberculosis Order, 1938, are kept under careful observation, and the Ministry of Agriculture and Fisheries are at once informed of any instance where an animal is suspected as suffering from a notifiable disease.

122,413 animals of all kinds were slaughtered and inspected at the Abattoir during the year, as against 112,709 in 1948, and 120,837 of them, as against 110,973 in 1948, were slaughtered by electrical or mechanical stunning. Oxen are stunned by captive bolt pistol, and calves, sheep and pigs by the use of electrically charged stunning tongs. The table which follows gives details regarding all animals which were slaughtered and inspected in the City in the year 1949.

**TABLE XXVIII.**—*Animals slaughtered and inspected in the City in the year 1949.*

Where Slaughtered	Oxen	Calves	Sheep and Lambs	Pigs	Horses	Total
Abattoir Main Slaughterhalls	26,907	1,627	88,381	3,557	—	120,472
Do. (Jewish Method)	388	1	1,187	—	—	1,576
Isolation Slaughterhall ..	285	24	38	18	—	365
Totals (Abattoir) ..	27,580	1,652	89,606	3,575	—	122,413
Private Slaughterhouses ..	—	—	—	1,429	2,644	4,073
Grand Totals ..	27,580	1,652	89,606	5,004	2,644	126,486

Of the 126,486 animals slaughtered and inspected in the City in the year 1949, there were 828 whole carcasses found to be in a diseased condition and condemned, and a further 11,088 carcasses, some part or organ of which was condemned. In the following table, are given further particulars relating to carcasses which were condemned, and separate information is shown in regard to carcasses which were affected with Tuberculosis.

**TABLE XXIX.**—*Carcasses Inspected and Carcasses Condemned in the City in the year 1949*

Class of Animal	Oxen	Calves	Sheep and Lambs	Pigs	Horses	Total
Number killed and inspected .. ..	27,580	1,652	89,606	5,004	2,644	126,486
Affected with Tuberculosis—						
Whole carcasses condemned ..	484	6	—	13	—	503
Carcasses of which some part or organ was condemned ..	5,714	—	1	140	—	5,855
Total affected with Tuberculosis ..	6,198	6	1	153	—	6,358
Affected with other diseases—						
Whole carcasses condemned ..	65	119	92	43	6	325
Carcasses of which some part or organ was condemned ..	1,934	11	2,773	190	325	5,233
Total affected with diseases other than Tuberculosis .. ..	1,999	130	2,865	233	331	5,558



By a local bye-law, introduced on 1st October, 1938, it is a requirement that all meat from animals killed outside the City, excepting salted or frozen meat or meat bearing the official stamp of the Minister of Health, must be brought to the Sheffield Corporation Abattoir for inspection. Particulars of the meat which was so brought to the Abattoir in 1949 are as follows : 287 carcasses of beef with offal, two calves with offal, 409 sheep with offal, 501 pigs with offal, and, in addition, 555 pig plucks, 22,045 pig heads, meat and other offal weighing 167 tons 3 cwt. 1 qr. 18 lbs.

**Diseases of Animals Acts (Non-Veterinary Functions).**—The non-veterinary functions under the Diseases of Animals Acts are administered by the Local Authority, and the inspectors appointed for this purpose made 340 visits during the year 1949. Information is given below under the main headings of this work :—

*Regulation of Movement of Swine Orders.*—The major provisions of these Orders are that all swine which are exposed for sale at markets are to be subject to detention and isolation for a period of twenty-eight days after leaving the market. Licences to move the swine are issued at the Sheffield Corporation Abattoir and at Wadsley Bridge Live Stock Market, and there was systematic visiting to ensure that the provisions of the Orders were observed.

*Transit of Animals Orders.*—Cleansing and disinfecting of road vehicles used for the transporting of animals to the Corporation Abattoir and to and from Wadsley Bridge Live Stock Market is done by the Corporation, at a small charge to cover expenses. 514 vehicles were cleansed and disinfected during 1949.

*Swine Fever.*—In cases of Swine Fever, it is the duty of the Local Authority to arrange for the disposal of the carcasses of infected pigs, and also to carry out the necessary disinfection of all sties or premises which have housed the diseased animals. There were four suspected cases in 1949, but, on further investigation, they were not confirmed.

*Tuberculosis Order, 1938.*—The local Authority is required to supervise the disinfection of the stalls or standings in which there have been cattle affected with Tuberculosis. Disinfection was in all cases carried out satisfactorily during the year.

*Foot and Mouth Disease.*—There were no outbreaks of Foot and Mouth Disease in the City during the year.

METEOROLOGY

TABLE XXX.—Meteorology during 1949. Records taken at Weston Park (430 feet above sea level).

Week ending	Mean Barometer Corrected.	Air Maximum. Mean Daily Temperature	Air Minimum. Mean Daily Temperature	Grass. Mean Daily Temperature	Soil 1 foot. Mean Daily Temperature	Soil 4 feet. Mean Daily Temperature	Total Rainfall for the week. (inches)	Mean Daily Sunshine. (hours)
Jan. 1st	29·72	40	31	28	37·9	43·9	2·05	1·3
8th	29·86	44	35	32	36·5	42·3	0·67	0·8
15th	30·23	47	38	35	38·6	42·0	0·21	2·5
22nd	30·08	48	41	38	41·4	42·3	0·07	1·7
29th	30·43	46	36	31	39·7	42·4	0·02	1·2
Feb. 5th	30·71	43	33	28	37·9	42·0	0·02	2·7
12th	30·02	46	34	29	35·2	40·7	1·06	4·1
19th	30·23	53	41	37	39·8	40·4	0·01	3·8
26th	30·29	51	40	36	41·3	41·5	0·33	2·2
Mar. 5th	30·32	42	34	32	38·6	41·8	0·67	4·6
12th	30·05	39	30	28	36·2	40·7	0·30	2·4
19th	30·07	48	37	35	39·1	40·2	0·35	3·7
26th	30·36	53	40	35	41·6	41·2	0·06	3·6
April 2nd	30·24	45	36	36	41·6	42·2	0·15	0·1
9th	29·80	50	41	39	44·6	43·0	2·24	4·2
16th	30·02	64	47	43	46·5	44·0	0·06	4·6
23rd	30·11	59	43	39	49·5	46·2	0·05	6·5
30th	30·11	56	43	39	49·4	47·2	0·12	5·9
May 7th	30·17	58	41	39	50·0	47·9	0·03	9·1
14th	30·39	64	44	37	50·9	48·5	—	9·2
21st	29·89	58	45	42	52·3	49·7	0·82	3·4
28th	29·74	60	48	45	53·3	50·4	0·45	5·7
June 4th	29·77	60	43	39	52·8	50·9	0·74	7·7
11th	30·04	67	52	49	55·6	51·4	0·05	7·1
18th	30·32	65	49	45	57·6	53·1	0·03	6·4
25th	30·25	71	48	42	57·5	53·9	—	10·2
July 2nd	30·29	77	54	49	60·6	55·1	0·01	9·2
9th	30·27	70	53	48	60·8	56·4	—	6·3
16th	30·09	73	54	51	61·0	56·9	3·48	5·4
23rd	30·12	67	54	51	57·8	56·4	0·59	2·7
30th	30·10	73	59	55	62·5	57·3	0·45	6·5
Aug. 6th	29·79	66	54	50	59·8	57·9	0·35	6·4
13th	30·16	66	51	47	59·1	57·7	0·95	6·7
20th	30·27	71	54	49	60·2	57·8	—	7·0
27th	30·16	73	58	54	61·9	58·2	0·07	3·6
Sept. 3rd	30·00	72	55	50	60·9	58·5	0·30	5·6
10th	30·11	73	56	52	61·4	58·8	0·05	6·1
17th	30·07	66	53	50	59·4	58·7	0·02	3·7
24th	30·08	64	54	52	58·4	57·9	1·00	1·6
Oct. 1st	30·26	66	53	49	58·2	57·7	—	4·4
8th	30·17	66	53	49	57·2	57·1	0·10	1·7
15th	30·08	64	52	47	56·5	56·8	0·74	3·9
22nd	29·59	55	45	42	53·2	56·0	0·90	3·7
29th	29·94	49	38	34	47·9	54·0	1·57	2·0
Nov. 5th	30·29	50	40	37	46·3	51·4	0·65	1·3
12th	29·52	49	40	37	45·2	50·0	1·69	3·0
19th	29·89	47	37	34	43·8	43·1	0·91	2·0
26th	29·50	49	39	37	43·9	47·6	1·13	0·8
Dec. 3rd	29·89	49	39	37	43·9	47·1	0·99	1·2
10th	29·63	44	37	35	42·8	46·6	1·25	0·6
17th	29·86	45	37	33	40·0	45·3	1·14	1·4
24th	30·00	47	36	33	39·2	44·1	0·51	1·7
31st	30·04	48	41	38	41·5	43·8	0·33	0·7



## INFANT MORTALITY AND STILL BIRTHS IN SHEFFIELD DURING 1948

Before considering the best method of preventing infant deaths, it was felt desirable to review all the infant deaths in a year (1948), and to attempt to discover the causes of, and any contributory factors to, these deaths—so as to take preventive action. With this object in view, an investigation was made into the medical and social circumstances associated with the infant deaths and still births occurring in Sheffield during 1948.

Private doctors, hospitals and midwives provided the medical information, and health visitors carried out the social enquiries.

It was only practicable to investigate the still births occurring to Sheffield women within the City, and the deaths of infants occurring in Sheffield and whose homes were in Sheffield ; this was due to the fact that there was migration both to and from the City.

For these reasons, and because of the difficulty in obtaining reliable information in a few of the cases, only 288 infant deaths and 214 still births were investigated. The 1948 official figures for the City were : 294 infant deaths and 226 still births.

Particular attention was paid to the possible influence of social class and living conditions, and an attempt was made to assess whether these factors contributed to the deaths.

Information obtained from enquiries under the following headings was recorded on punched cards which allowed of easy sorting :—

Sex of child, dates of birth and death, age at death, place of birth, place of death, legitimacy, cause of death, birth weight, congenital malformation, length of pregnancy, complications in pregnancy or during birth, complications to mother or child in lying-in period, ill health of mother, feeding of baby, baby's last illness, type of home, age of mother, mother's clinic attendances, her care of the baby, her health, her occupation, obstetric history, age and occupation of father.

In many instances, we found that our own information, derived as it was from a number of sources, and containing frequently a report on autopsy findings, was more complete than the information which would be available when the death certificate was signed. This largely accounts for the differences which exist between the official figures of deaths from certain causes and the figures used in this investigation. The causes of many infant deaths were difficult to define accurately, particularly without an autopsy examination, and the value of this enquiry would have been enhanced if post-mortem examinations could have been arranged after every death. An autopsy was performed on 98 infants who died and on 30 still births, apart from special examinations of the placenta and umbilical cord, which frequently showed the cause of death. It was originally hoped that it would be possible to express an opinion with regard to each death, as to whether it could have been prevented by fully applying the medical knowledge and facilities already at our disposal. We concluded, however, that a person not intimately associated with a case seldom can give a reliable assessment on this point, and, although our primary object was not attained, we have investigated and analysed many of the factors associated with the infant deaths, and considered it desirable to record our findings.

### LIVE BIRTHS, 1948.

Information concerning all live births registered in Sheffield was obtained from the Registrar for the City—to whom we acknowledge thanks. The father's occupation was noted at the time of registering the birth, and this enabled us to distribute the births amongst the Registrar General's five social classes. Class I includes the professional men, Class III the skilled artisans, and Class V the unskilled labourers. Class II is intermediate between Classes I and III, and includes managers and owners of businesses. Class IV is intermediate between Classes III and V, and embraces the semi-skilled workers. The distribution amongst the five social classes of the legitimate births occurring in Sheffield, to Sheffield residents, is shown in the following statement. It was found impracticable to classify the 183 male and 152 female (total 335) illegitimate births in this way.

*Registered Births in Social Groups, according to Occupation.*

SHEFFIELD RESIDENTS ONLY. LIVE BIRTHS ONLY, DURING 1948.

	Social Class						Total
	I	II	III	IV	V	Not stated	
<i>Legitimate Births</i>							
Male .. ..	46	241	3,012	842	281	4	4,426
Female .. ..	53	210	2,890	785	259	5	4,202
TOTALS .. ..	99	451	5,902	1,627	540	9	8,628

TABLE 1.—Causes of Death and Social Class.  
**INFANT DEATHS.**  
**MALES.**

Marital Status, etc.	Social Class	CAUSE OF DEATH.															TOTAL DEATHS	
		Prematurity	Malformation	Abandonment or Murder	Con-genital Syphilis	Intus-suscep-tion	Cranial Injury	Respira-tory Infection	Measles and Whoop-ing cough	Septic Con-ditions	Enteritis	Accident	Convul-sions	Acci-dents at Birth	Pink Disease	Blood Disease		Maras-mus
Legitimate { Parents cohabiting { Parents not cohabiting { Not known { Illegitimate ... Marital State Unknown ...	I	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
	II	1	1	—	—	1	2	—	—	—	—	—	—	2	—	1	—	8
	III	25	10	—	—	—	13	8	10	2	1	1	3	3	2	3	—	97
	IV	6	6	—	—	—	1	7	1	2	1	—	—	—	—	—	1	31
	V	6	3	—	—	—	3	4	1	—	6	1	—	1	—	—	2	27
Illegitimate ...	IV	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1
	—	1	—	—	—	1	—	—	—	2	—	—	—	—	1	—	6	
	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	3	
TOTALS ALL CLASSES	41	22	3	—	1	20	19	12	4	33	4	1	6	2	5	3	176	

**FEMALES.**

Marital Status, etc.	Social Class	CAUSE OF DEATH.															TOTAL DEATHS	
		Prematurity	Malformation	Abandonment or Murder	Con-genital Syphilis	Intus-suscep-tion	Cranial Injury	Respira-tory Infection	Measles and Whoop-ing cough	Septic Con-conditions	Enteritis	Accident	Convul-sions	Acci-dents at Birth	Pink Disease	Blood Disease		Maras-mus
Legitimate { Parents cohabiting  Parents not cohabiting Illegitimate ...	I	2	1	—	—	—	—	—	1	—	1	—	—	—	—	—	—	5
	II	3	—	—	—	—	1	—	1	—	1	—	—	—	—	—	—	7
	III	14	11	—	—	—	3	14	7	1	—	—	3	—	2	—	—	59
	IV	1	2	—	—	—	2	3	2	1	1	—	2	—	1	—	—	17
	V	4	7	—	—	—	—	2	1	1	1	—	—	—	—	—	1	18
Illegitimate { Parents not cohabiting Illegitimate ...	IV	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	5
TOTALS ALL CLASSES		26	22	—	1	—	6	19	12	4	8	4	—	5	—	4	1	112



The relative proportions of the population in the five social classes will not be known until the census has been taken. We can say that Class III is by far the largest class and about two-thirds of all births (68·4%) occurred in this class. Social Classes I, II, IV and V had : 1·1%, 5·2%, 18·9% and 6·3% of the births respectively. Not knowing the numbers of the population in each social class, we cannot at present calculate the birth rates in the social classes. It is generally assumed that Class I has the lowest birth rate and the rate progressively rises to Class V. This is borne out (Table 3) by the fact that larger families were found to occur in the lower social classes.

### INFANT DEATHS.

**Causes of Death and Social Class.**—There was a total of 8,628 legitimate children—4,426 males and 4,202 females—born in Sheffield, to Sheffield residents, during 1948, and, amongst children in this category, there occurred, during 1948, 176 deaths of males and 112 deaths of females under the age of one year. It must be realised that some of the infant deaths relate to births which had occurred in the previous year. The preponderance of male over female deaths from all causes is marked, this preponderance being shown particularly amongst infants dying of : prematurity, intra-cranial injury and enteritis.

Prematurity was the most serious cause of loss of infant life (67 deaths), but respiratory infection, including measles and whooping cough, accounted for 62 deaths. Bowel infection killed a further 41 babies. 44 babies were born so malformed that they died. Accidents and injuries associated with birth caused a further 37 deaths—a number of these children being also premature, but not to such a degree that the prematurity alone would be likely to cause death, although the birth injury might have been consequent upon the baby being premature. This matter is discussed later.

The following table shows the high mortality rates in Classes I and V. The numbers, however, in Social Class I were small and, for statistical purposes, they cannot be considered reliable.

**TABLE 2.**—*Infant Mortality in Social Classes.*

	Social Class						Total
	I	II	III	IV	V	Unknown	
<i>Legitimate—(Male and Female combined)</i>							
No. of births .. ..	99	451	5,902	1,627	540	9	8,628
No. of deaths .. ..	7	15	156	49	46	1	274
Infant mortality rate per 1,000 live births	71	33	26	30	85	—	32

Death rates from prematurity, malformation, birth injury and respiratory and bowel infection were higher in children born into Classes IV and V. (semi-killed and unskilled workers).

**TABLE 3.**—*Position in Family and Social Status of Infants dying in their first year of life.*

### MALES.

Position in Family	Distribution by Social Class						Totals
	I	II	III	IV	V	Unknown	
<i>Legitimate</i>							
Only child .. ..	2	3	37	13	9	—	64
1 other child living ..	—	5	39	11	4	—	59
2 other children living	—	—	12	4	4	—	20
3 „ „ „ ..	—	—	3	2	2	—	7
4 „ „ „ ..	—	—	1	—	2	—	3
5 „ „ „ ..	—	—	—	—	2	—	2
6 „ „ „ ..	—	—	—	1	2	—	3
7 „ „ „ ..	—	—	—	—	—	—	—
8 „ „ „ ..	—	—	—	—	1	—	1
9 „ „ „ ..	—	—	1	—	1	—	2
? „ „ „ ..	—	—	4	1	—	1	6
TOTALS .. ..	2	8	97	32	27	1	(fwd.)167

TABLE 3 (continued)

Position in Family	Distribution by Social Class						Totals
	I	II	III	IV	V	Unknown	
Percentage of deaths in social classes occurring in families of more than three children .. ..	0%	0%	9.3%	12.5%	37.0%	—	(fwd.) 167
<i>Illegitimate</i>							
Only child .. ..	3	}					Total .. .. 6
1 other child living ..	1						
2 other children living	1						
3     "     "	1						
*Nothing known of Family .....							3
TOTAL — MALES .. .. .							176

\* One body was found in a culvert and another in the River Don : both of these children had had a separate existence ; the third child was found alive, but abandoned, and died subsequently in hospital.

## FEMALES.

Position in Family	Distribution by Social Class						Totals
	I	II	III	IV	V	Unknown	
<i>Legitimate</i>							
Only child .. ..	3	2	19	7	6	—	37
1 other child living ..	—	2	20	5	3	—	30
2 other children living	1	2	7	2	2	—	14
3     "     "     " ..	—	1	8	1	1	—	11
4     "     "     " ..	—	—	—	1	2	—	3
5     "     "     " ..	—	—	1	—	1	—	2
6     "     "     " ..	—	—	1	—	—	—	1
7     "     "     " ..	—	—	—	—	1	—	1
13   "     "     " ..	—	—	—	—	1	—	1
?     "     "     " ..	1	—	3	1	2	—	7
TOTALS ..	5	7	59	17	19	—	107
Percentage of deaths in social classes occurring in families of more than three children	0%	14.3%	22.0%	17.6%	42.1%	—	
<i>Illegitimate</i>							
Only child .. ..	3	}					Total .. .. 5
1 other child living ..	1						
4 other children living	1						
TOTAL — FEMALES .. .. .							112

The preponderance of infant deaths occurs among the children of birth ranks : 1, 2 or 3. This is to be expected, because the majority of children in the country are included in these birth ranks.

Although we have been able to classify all Sheffield births by social class, we were not able to do this in relation to the number of children in the family, and so could not compare the infant death rates in relation to the size of family in the five social classes.



TABLE 4.—Deaths of Legitimate Infants in relation to the number of surviving children.

				Number of Infant deaths	Percentage of total (261)	* Distribution of legitimate maternities in England and Wales according to number of surviving previous children.
Only child	..	..	..	101	38.7%	44.1%
1 other child	..	..	..	89	34.1%	30.7%
2 other children	..	..	..	34	13.0%	13.3%
3 "	"	"	..	18	6.9%	5.6%
4 "	"	"	..	6	2.3%	2.7%
5 "	"	"	..	4	1.5%	1.5%
6 "	"	"	..	4	1.5%	0.9%
7 "	"	"	..	1	0.4%	0.5%
8 "	"	"	..	1	0.4%	0.3%
9 "	"	"	..	2	0.8%	0.2%
10 and over other children	..			1	0.4%	0.2%
				261	—	—
No information	..	..	..	13	—	—
TOTAL				274	—	—

\*Calculated from Table K.K.—Registrar General’s Statistical Review, 1948 (Civil Tables).

We do not know the distribution of legitimate births in Sheffield in 1948 in relation to the number of surviving previous children, but the figures giving this relationship for the whole of England and Wales are published by the Registrar General. Comparison of the national figures with the figures for infant deaths in Sheffield, distributed according to the number of surviving previous children, shows that there is no significant difference between the two sets of figures. The inference is that the infant mortality rate was not significantly greater in the large families of children, but definite conclusions on such an important point should not be made on the findings of one city for only one year.

It is generally held that the death rate amongst first born children is higher than amongst second children. There is no support for this view from the Sheffield figures for 1948 if the national distribution of legitimate maternities, according to the number of surviving previous children (right hand column of above table), is applicable to Sheffield.

**Premature Live Born Babies.**—There were 539 premature births in Sheffield during 1948. This represents 6% of all the live births.

TABLE 5.—Death Rates in relation to Birth Weights of all notified Births of Premature Children of Sheffield Residents born in the City during 1948.

BIRTH WEIGHTS		MALES			FEMALES		
		Total born	Total dying	Percent- age dying	Total born	Total dying	Percent- age dying
Under 2½ lbs.	..	11	11	100%	11	*9	82%
2½ to 4 lbs.	..	36	21	58%	41	12	29%
4 lbs. to 5½ lbs. inclusive	..	201	33	16%	239	19	8%

\* The two females were thriving when two years old.

This table shows the small number of live births occurring in the under 2½ lbs. group and the small chance of survival of such a tiny baby. It is interesting to note that, in all the weight groups, the chance of survival of a premature male baby is markedly less than the chance of survival of a premature female baby.

TABLE 6.—Causes of Death of Premature Babies according to the fullest information obtainable.

BIRTH WEIGHTS				CAUSE OF DEATH						Totals
				Premat- urity	Intra- cranial injury	Infec- tion	Blood disorder	Malform- ation	Accidents at birth	
<i>Males</i>										
Under 2½ lbs.	..	..		11	—	—	—	—	—	11
2½ to 4 lbs.	..	..		17	4	—	—	—	—	21
4 to 5½ lbs. inclusive	..	..		13	5	5	2	6	2	33
Totals	..	..		41	9	5	2	6	2	65
<i>Females</i>										
Under 2½ lbs.	..	..		9	—	—	—	—	—	9
2½ lbs. to 4 lbs.	..	..		10	—	—	—	2	—	12
4 to 5½ lbs. inclusive	..	..		7	1	3	3	4	1	19
Totals	..	..		26	1	3	3	6	1	40
Totals—Male and Female	..			67	10	8	5	12	3	105

The cause of death in a premature baby is often difficult to assess. The commonest cause of death, particularly amongst the smallest babies, was ascribed to the immature state in which the baby was born. Among premature babies, intra-cranial injury at the time of birth is frequent, but often a post-mortem examination is required to confirm its existence. Malformation also is frequent amongst premature babies and is often of a degree severe enough by itself to cause death. Multiple malformations are apt to occur in the same child, and it is not possible to assess the full effect of these and other pathological conditions individually—even with a post-mortem examination.

TABLE 7.—Age at Death of Premature Babies.

WEIGHT				AGE AT DEATH				Totals
				Less than 24 hours	1—7 days	1—4 weeks	4 weeks— 52 weeks	
<i>Males</i>								
Under 2½ lbs.	..	..		9	1	1	—	11
2½ to 4 lbs.	..	..		7	11	3	—	21
4 to 5½ lbs. inclusive	..			16	6	5	6	33
<i>Females</i>								
Under 2½ lbs.	..	..		6	3	—	—	9
2½ to 4 lbs.	..	..		3	7	1	1	12
4 to 5½ lbs. inclusive	..			9	4	2	4	19
Totals—Males and Females	..			50	32	12	11	105

The vast majority of deaths of premature babies occur in the neonatal period, 75% (i.e. 15 out of 20) of the deaths in the group under 2½ lbs. occurring in the first 24 hours after birth. In fact, 48% (i.e. 50 out of 105) of the deaths from all causes amongst premature babies occurred in the first 24 hours after birth.

TABLE 8.—Places of Birth and Death.

PLACE OF BIRTH				PLACE OF DEATH							
				Home		Hospital		Nursing Home		Other	
				M	F	M	F	M	F	M	F
Home	..	..	25	13	15	9	10	3	—	—	1
Hospital	..	..	39	26	1	1	38	25	—	—	—
Nursing Home	..		1	1	—	—	—	1	1	—	—

Among the 105 deaths of premature born babies, 76 occurred in hospital. The figures illustrate that premature babies born at home are often transferred to hospital after birth.



TABLE 9.—Causes of Prematurity amongst babies who subsequently died (according to weight at birth).

CAUSE OF PREMATURETY	BIRTH WEIGHTS						Total
	MALES			FEMALES			
	Under 2½ lbs.	2½ to 4 lbs.	4 to 5½ lbs. inclusive	Under 2½ lbs.	2½ to 4 lbs.	4 to 5½ lbs. inclusive	
Toxæmia—							
Born naturally...     ...     ...     ...	1	1	—	—	1	—	3
Labour induced     ...     ...     ...	1	—	3	1	1	1	7
Antepartum Hæmorrhage—							
Born naturally     ...     ...     ...	—	2	2	1	1	1	7
Labour induced, or child born by Cæsarean Section     ...	—	—	1	—	—	—	1
Placenta Prævia—							
Born naturally...     ...     ...     ...	—	—	—	—	—	1	1
Cæsarean Section     ...     ...     ...	—	1	1	—	—	1	3
Operation on mother in pregnancy     ...     ...	1	3	1	—	—	—	5
Twins     ...     ...     ...     ...     ...	3	3	1	1	—	4	12
Accidental fall of mother     ...     ...     ...	1	—	—	—	—	—	1
Illness of mother, other than toxæmia     ...	1	2	3	1	1	2	10
Hydramnios...     ...     ...     ...     ...	—	—	1	—	2	—	3
Labour induced for anencephaly     ...     ...	—	—	1	—	—	—	1
Rhesus incompatibility     ...     ...     ...	—	—	1	—	—	3	4
Other causes. (This group included most of the congenital abnormalities)     ...	3	9	18	5	6	6	47

Maternal illness, including : toxæmia of pregnancy, antepartum hæmorrhage, pneumonia, and conditions which necessitate an abdominal operation during pregnancy, is shown to be a serious cause of wastage of infant life because of the association with premature birth. Hence the likelihood of premature births associated with such illness occurring in hospital. This shows the great importance of the mother receiving continued ante-natal care from an early period of pregnancy, in order to prevent, if possible, the development of any serious maternal illness which might lead to a premature birth.

Twelve premature born twins died and, in at least twelve other premature children, congenital malformation was so severe as to cause their death.

TABLE 10.—Ages of mothers whose premature babies subsequently died.

Age of Mother	PREMATURE BABIES			Total of babies who died during the year from all causes
	Males	Females	Total	
Less than 20 years .. ..	5	2	7	12
20—25 years .. ..	19	14	33	99
26—30 „ .. ..	17	9	26	84
31—35 „ .. ..	12	7	19	39
36 years and over .. ..	11	7	18	39
Unknown .. ..	1	1	2	15

When the ratio of deaths of premature born babies to total infant deaths is considered, it appears that, of the twelve infants who died and whose mothers were aged less than 20 years, seven were premature babies. The proportion for mothers aged 20 to 30 years was approximately one-third and for mothers aged over 30 years, approximately half. These findings emphasise the great importance of prematurity in relation to infant deaths, especially in the case of children born to the younger and to the older mother.

We have given further consideration in the next table to the case of the infant deaths among the children born to the young mother (under 20 years of age). It will be noted that half the infant deaths occurred as a result of infection.

TABLE 11.—Deaths amongst babies born to mothers under 20 years of age.

BIRTH WEIGHT	CAUSE OF DEATH							TOTAL
	Prema- turity	Intra- cranial injury	Maras- mus	Menin- gitis	Pneu- monia	Whoop- ing Cough	Gastro- Enter- itis	
Under 2½ lbs. ..	—	—	—	—	—	—	—	—
2½ to 4 lbs. ..	4	—	—	—	—	—	—	4
4 to 5½ lbs. ..	—	1	—	1	1	—	—	3
inclusive								
5½ lbs. to 7 lbs. ..	—	—	1	—	—	1	2	4
Over 7 lbs. ..	—	—	—	—	—	1	—	1
Totals .. ..	4	1	1	1	1	2	2	12

Total deaths due to infection=6

TABLE 12.—Still-births and Miscarriages prior to the Premature Birth.

PREVIOUS STILL-BIRTHS AND MISCARRIAGES OF MOTHERS IN RELATION TO THE BIRTH RANK OF  
PREMATURE BABIES WHO SUBSEQUENTLY DIED.

PREMATURE MALES WHO DIED								PREMATURE FEMALES WHO DIED							
Total Pregnan- cies	Number of previous stillbirths or miscarriages						No. of Cases	Total Pregnan- cies	Number of previous stillbirths or miscarriages						No. of Cases
	0	1	2	3	4	Not known			0	1	2	3	4	Not known	
1	26					—	26	1	12					—	12
2	18	—				—	18	2	10	1				—	11
3	4	5	—			—	9	3	2	3	—			—	5
4	4	1	1	—		—	6	4	4	1	—	—		—	5
5	—	—	—	1	—	—	1	5	1	1	—	—	—	—	2
over 5	2	1	—	1	—	—	4	over 5	1	1	1	1	—	—	4
Unknown	—	—	—	—	—	1	1	Unknown	—	—	—	—	—	1	1
TOTALS ...	54	7	1	2	—	1	65	TOTALS ...	30	7	1	1	—	1	40

Among the mothers of the 105 premature born babies who subsequently died, 14 mothers had each suffered only one previous still-birth or miscarriage, and five mothers had more than one still-birth or miscarriage. In investigating the whole of the 288 infant deaths during the year, a history of previous still-birth or miscarriage was encountered on only 43 occasions. There is, as far as we can discover, no evidence that still-births or miscarriages are more common among the mothers whose premature babies died.

**Infections.**—Infections other than gastro-enteritis accounted for 70 of the 288 infant deaths. The following table deals with the deaths from infection other than gastro-enteritis. This latter condition has a different ætiology and is separately considered. The majority of infections (62 in number) were respiratory in type, the remaining eight cases consisting of such conditions as septic hæmatomata, meningitis, etc.



TABLE 13.—Measles, Whooping Cough. Pneumonia, Septic Conditions.

Cause of Death	AGE AT DEATH FROM INFECTION								Total
	Less than 1 mth.	1 mth. but less than 2 mths.	2 mths. but less than 3 mths.	3 mths. but less than 4 mths.	4 mths. but less than 5 mths.	5 mths. but less than 6 mths.	6 mths. but less than 9 mths.	9 mths. but less than 1 yr.	
MALES									
Measles and Whooping Cough	1	1	1	3	—	1	4	1	12
Pneumonia ... ..	3	2	3	2	—	1	6	2	19
Septic conditions ... ..	1	—	—	—	—	—	1	2	4
TOTALS ... ..	5	3	4	5	—	2	11	5	35
FEMALES									
Measles and Whooping Cough	—	—	1	3	1	3	3	1	12
Pneumonia ... ..	2	2	—	3	3	1	4	4	19
Septic conditions ... ..	—	1	—	1	—	—	1	1	4
TOTALS ... ..	2	3	1	7	4	4	8	6	35

As far as this table shows, the age of an infant does not appear to be associated with the chance of dying from these infections.

**Size of Family.**—We thought it advisable to try to find out if the number of children in the family had any bearing upon the mortality from infection of infants in the family—in other words—if death from infections was commoner in infants living in large families.

TABLE 14.—Number of Previous Live Born Children in the Families of Infants who died.

Cause of death of Infant	No. in the families of Males who died										No. in the families of Females who died									
	0	1	2	3	4	5	6	More than 6	Un-known	—	0	1	2	3	4	5	6	More than 6	Un-known	—
Measles and Whooping Cough ... ..	2	5	2	—	1	—	1	—	1		3	3	4	—	1	—	—	1	—	
Pneumonia... ..	3	8	2	1	2	—	1	1	1		*5	8	2	2	—	—	—	—	2	
Septic conditions ... ..	3	—	—	—	—	—	—	—	1		*1	1	1	—	—	—	—	—	1	
TOTALS ... ..	8	13	4	1	3	—	2	1	3		9	12	7	2	1	—	—	1	3	

\* Includes one illegitimate child.

The relation between birth rank, and death from infection (legitimate children only), is shown below.

TABLE 14a.—Relation between Birth Rank, and Death from Infection.

Birth rank	Total legitimate children dying of infection	Percentage of total (62) dying of infection	*Total legitimate maternities in England and Wales in each of these categories	Percentage total maternities in England and Wales
1st child .. ..	15	24%	306,095	41·4%
2nd child .. ..	25	40%	227,887	30·8%
3rd „ .. ..	11	18%	104,288	14·1%
4th „ .. ..	3	5%	45,986	6·2%
5th „ .. ..	4	6%	22,565	3·0%
6th „ .. ..	—	0%	12,550	1·7%
7th „ .. ..	2	3%	7,439	1·0%
More than 7 children ..	2	3%	11,919	1·6%
	62	—	—	—
Not known .. ..	6 and therefore not included in calculation of percentages.		—	—

\* Table II of the Registrar General’s Statistical Review for 1948 (Part II Civil).

The number of siblings in the family of the infant appears to have some bearing upon the chances of its dying of these infections. The two sets of figures in Table 14a are not necessarily comparable, because the right hand table refers to the country as a whole, but seem to indicate the much smaller chance of death from infections in a baby who is an only child.

TABLE 15.—*Weight at Birth in relation to the cause of Death.*

Cause of death	BIRTH WEIGHTS											
	MALES						FEMALES					
	Under 2½ lbs.	2½ to 4 lbs.	4 to 5½ lbs. incl.	5½ to 7 lbs.	Over 7 lbs.	Weight un-known	Under 2½ lbs.	2½ to 4 lbs.	4 to 5½ lbs. incl.	5½ to 7 lbs.	Over 7 lbs.	Weight Un-known
Measles and Whooping Cough ... ..	—	—	—	4	7	1	—	—	—	4	8	—
Pneumonia ... ..	—	—	3	5	10	1	—	—	1	8	7	3
Septic conditions ... ..	—	—	—	1	2	1	—	—	1	2	—	1
TOTALS ... ..	—	—	3	10	19	3	—	—	2	14	15	4

From these figures it does not appear that infection was an important cause of death amongst premature children in 1948.

TABLE 16.—*Type of House in relation to Deaths from Infection excluding Gastro-Enteritis.*

Cause of death	TYPE OF HOUSE							Total
	Con-demned	Back to back	Corpor-ation	Terrace	Detached	Lodgings	Inform-ation unob-tainable	
<i>Males.</i>								
Measles and Whooping Cough	1	1	1	5	2	1	1	12
Pneumonia ..	—	2	7	5	3	1	1	19
Septic conditions ..	—	1	—	1	—	1	1	4
<i>Females</i> .. ..								
Measles and Whooping Cough	—	—	1	7	2	1	1	12
Pneumonia ..	1	1	3	10	—	2	2	19
Septic conditions ..	—	1	1	—	1	—	1	4

Infant deaths from infections are not particularly associated with the worst housing conditions even though one often finds families with large numbers of children living under bad housing conditions.

TABLE 17.—*Cleanliness of Home in relation to deaths from Infection (excluding Gastro-Enteritis).*

Cause of death	MALES				FEMALES			
	Clean	Fair	Dirty	No Inform-ation	Clean	Fair	Dirty	No Inform-ation
Measles and Whooping Cough	6	4	1	1	9	2	—	1
Pneumonia ..	15	1	2	1	13	3	—	3
Septic conditions ..	3	—	—	1	1	2	—	1
Totals .. ..	24	5	3	3	23	7	—	5

A recent survey of a random sample of the homes of Sheffield school children (see the Section on Acute Rheumatism) indicated that 21% of all such homes were not satisfactorily clean. As about the same proportion of deaths from infection (excluding enteritis)—viz. 24%—occurred in homes that were not considered clean, there is no evidence that dirty homes, as such, are associated with increased mortality from these infections.



In Table 18, the legitimate births in the City have been distributed according to the Social Class of the father (see Table 2) and we have compared this distribution with the social classification of the parents of the infants who died from infective conditions.

**TABLE 18.**—*Mortality from Infections in relation to Social Class (legitimate children only).*

Distribution	SOCIAL CLASS				
	I	II	III	IV	V
A. Total births .. .. .	99	451	5,902	1,627	540
B. Total deaths (all causes) .. ..	7	15	156	49	46
C. Total deaths due to : Measles, Whooping Cough, Pneu- monia, Sepsis .. .. .	1	1	42	15	9
D. (i) Percentage of total deaths due to above causes, by Social Class (C. as a percentage of B.) ..	14·3%	6·6%	26·9%	30·6%	19·5%
(ii) Death rates per 100 births (C. as a percentage of A.) .. ..	1·01	0·22	0·75	0·98	1·66
E. * Deaths from enteritis (see also Table 25) .. .. .	—	1	23	8	7
F. Total deaths from causes (C. + E.)	1	2	65	23	16
G. (i) Percentage of total deaths (B) due to infection. (C. + E.) ..	14·3%	13·3%	41·7%	46·9%	34·7%
(ii) Death rates per 100 births from infection (C. + E.) .. ..	1·01	0·44	1·10	1·41	2·96

\* A further two deaths occurred in illegitimate children. This explains the difference between these figures and those in Table 25.

It is not permissible to draw firm conclusions from the small figures in these columns, especially in Social Class I, but there is an indication that infantile deaths from infective conditions, including enteritis, are less common in the better class families, and tend to rise as we descend the social scale.

**Gastro-Enteritis.**—There appear to be certain special features associated with Gastro-Enteritis which merit a more detailed scrutiny.

**TABLE 19.**—*Total Number of Deaths from Gastro-Enteritis.*

Sex of Infant	No. of Deaths
Male .. ..	33 (including two illegitimate children)
Female ..	8
Total ..	41

The considerable difference in the numbers of male and female infants dying of this disease is at once apparent. As the disease is not notifiable, the attack rate and mortality rate amongst those contracting the disease are not known.

**TABLE 20.**—*Place of Death.*

Sex of Infant	Place of Death	
	In hospital	At home
Male .. ..	33	—
Female .. ..	4	4
Totals ..	37	4

The mortality figures indicate that the majority of severe cases of this disease received attention in hospital, having contracted the infection at home. It was found, however, that four children died from Gastro-Enteritis which had been contracted in hospital as follows :—  
3 males died at ages : 2 months (1 case), 5 months (2 cases).  
1 female died at 6 months.

TABLE 21.—*Ages at Death from Gastro-Enteritis.*

Age	DEATHS		
	Males	Females	Totals
1 to 7 days ..	—	—	—
1 to 4 weeks ..	2	1	3
1 to 2 months ..	6	—	6
2 to 3 „ ..	7	1	8
3 to 4 „ ..	3	2	5
4 to 5 „ ..	3	—	3
5 to 6 „ ..	6	1	7
6 to 9 „ ..	4	3	7
9 to 12 „ ..	2	—	2
Totals ..	33	8	41

32 of the 41 deaths occurred in children under six months old, at a time when breast milk should have formed a major part of the diet.

TABLE 22.—*Type of Milk Feeding at time of onset of Disease.*

Type of Milk Feeding	Males	Females	Totals
Breast only .. ..	3	2	5
Breast plus Cows milk with or without solids	3	—	3
No breast milk .. ..	27	6	33

Only eight of these 41 children were having any breast milk when the disease began, and, in five of the eight cases, it is stated that no milk other than breast milk had been given prior to the onset of illness.

The following table shows the deaths from Gastro-Enteritis in relation to the Weight at Birth :

TABLE 23.—*Birth Weight.*

Birth Weight	Deaths from Gastro-Enteritis		
	Males	Females	Total
Under 2½ lbs. .. ..	—	—	—
2½ to 4 lbs. .. ..	—	—	—
4 to 5½ lbs. inclusive ..	2	1	3
5½ to 7 lbs. .. ..	9	4	13
Over 7 lbs. .. ..	21	3	24
Weight unknown .. ..	1	—	1

There does not appear to be any relationship, in the group under investigation, between prematurity and death from Gastro-Enteritis. As Gastro-Enteritis has in the past been associated with dirt and filth, it was felt desirable to investigate the cleanliness of the home in the cases who died of Gastro-Enteritis.

TABLE 24.—*Cleanliness of Home.*

Cleanliness of home	Males	Females	Total
Clean .. .. .	20	7	27 67·5%
Fair .. .. .	9	1	10
Dirty .. .. .	3	—	3 } 32·5%
Not ascertained ..	1	—	1

Note.—The homes of 352 controls (school children) were visited and 75 (i.e. 21%) were found to be only fairly clean, or dirty.

32·5 per cent of the deaths from Gastro-Enteritis occurred in homes that were not as clean as they might be. This compares with the 21 per cent of homes of school children in that category (see p. 30), and suggests that there might be an increased risk of death from Enteritis to an infant born into a home that is not clean.



The following table relates the deaths from Gastro-Enteritis with the social class of parents.

TABLE 25.—*Social Class.*

Social Class	Males	Females	Total	Total births in Social Class	Death rate from Gastro-Enteritis per 100 births
I .. .. .	—	—	—	99	—
II .. .. .	—	1	1	451	0·22
III .. .. .	19	4	23	5,902	0·39
IV .. .. .	6	2	8	1,627	0·49
V .. .. .	6	1	7	540	1·30
Illegitimate .. ..	2	—	2	335	0·60

The death rate from Gastro-Enteritis rises steadily as the social class falls, and there is a relatively high death rate from this disease amongst the infants of the labouring class.

Efforts were made to relate the quality of the maternal care with the incidence of deaths from Gastro-Enteritis.

TABLE 26.—*Motherly Care in relation to deaths from Gastro-Enteritis.*

Motherly Care	DEATHS FROM GASTRO-ENTERITIS		
	Males	Females	Total
Good .. .. .	20	6	26
Fair .. .. .	10	1	11
Poor .. .. .	1	—	1
Not ascertained .. ..	2	1	3

TABLE 26a.—*Mother working after birth of child (showing the association between the deaths from Enteritis and Employment of the mother).*

Employment of Mother	Males	Females	Total
Full-time employment ..	2	—	2
Part-time employment ..	1	—	1
Not employed .. .. .	26	7	33
Not ascertained .. ..	4	1	5

TABLE 26b.—*Total pregnancies in relation to the death of a child from Gastro-Enteritis.*

Children who died	Number of Pregnancies						
	1	2	3	4	5	6	7
Male deaths from Gastro-Enteritis .. .. .	13	9	8	1	1	—	1
Female deaths from Gastro-Enteritis .. .. .	4	2	1	1	—	—	—
TOTALS .. .. .	17	11	9	2	1	—	1

It is difficult to set out standards of maternal care, and to define closely the meaning of : good, fair and poor—as applied to motherly care. In the absence of a control series, the comparative estimated figures for the standard of care given by mothers to their babies who died from **all** causes were :—

Good .. .. .	107 cases
Fair .. .. .	21 „
Poor .. .. .	9 „

A proper assessment of the problem of motherly care is complicated by the fact that this care may not be of importance in those children who died early in life in hospital and who had never really been under the care of their mothers. The figures, as far as they go, show no particular association of death from Enteritis with poor maternal care. There is no evidence of association between mortality from Gastro-Enteritis and (1) employment of mother, or (2) large families.

TABLE 27.—*Type of House in relation to infant deaths from Gastro-Enteritis.*

Type of House	DEATHS		
	Males	Females	Total
Condemned .. .. .	3	—	3
Back to back .. .. .	4	1	5
Corporation .. .. .	14	1	15
Terrace .. .. .	5	2	7
Detached or Semi-detached ..	3	2	5
Lodgings .. .. .	4	2	6
TOTALS .. .. .	33	8	41

There was no preponderance of Enteritis deaths associated with unsatisfactory housing.

**Infant Deaths caused by Congenital Malformation.**—The information available relates only to malformed children who died from that cause. No information is available as to the total incidence of malformation amongst all Sheffield infants.

TABLE 28.—*Deaths from Congenital Malformations.*

(a) NUMBER OF DEATHS.							
Males—22.				Females—22.		Total—44.	
Illegitimate—1 Male (included in above).							
(b) PLACE OF DEATH.							
				In hospital		At home	
Males	..	..	..	..	14	..	8
Females	..	..	..	..	15	..	7
TOTALS					29	..	15

(c) AGE AT DEATH OF CHILDREN WHO DIED OF CONGENITAL MALFORMATION.

Age at death				Males	Females	Totals	
Less than 24 hours .. .. .	..	..	..	5	4	9	} 23 neo-natal deaths.
1—7 days .. .. .	..	..	..	4	4	8	
1—4 weeks .. .. .	..	..	..	4	2	6	
1—2 months .. .. .	..	..	..	1	1	2	
2—3 „ .. .. .	..	..	..	2	2	4	
3—4 „ .. .. .	..	..	..	3	1	4	
4—5 „ .. .. .	..	..	..	1	5	6	
5—6 „ .. .. .	..	..	..	—	—	—	
6—9 „ .. .. .	..	..	..	1	—	1	
9—12 „ .. .. .	..	..	..	1	3	4	

About half (52·3 per cent.) of the deaths from malformation occurred in the neo-natal period.



The following table shows the distribution of the Congenital Malformations which caused infant deaths.

TABLE 29.—Types of Malformation.

Type of Malformation	Males	Females	Totals
Heart and aorta .. .. .	6	5	11
Multiple .. .. .	2	3	5
Cranial .. .. .	3	4	7
Spina bifida .. .. .	1	1	2
Hydrocephalus and spina bifida ..	—	3	3
Mongol .. .. .	1	2	3
Abnormalities of the alimentary tract .. ..	4	2	6
„ of respiratory system	2	1	3
„ of urinary system ..	2	—	2
Other.. .. .	1	1	2
TOTALS .. .. .	22	22	44

The importance of maldevelopment of the Heart and Blood Vessels and of the Central Nervous System as causes of death are well shown.

TABLE 30.—Age of Mother.

Age of Mother	BABY DEATHS			Numbers in age groups of all Sheffield mothers whose babies died from whatever cause (for comparison)	Deaths from malformation expressed as a percentage of all deaths and related to the age of the mother
	Males	Females	Total		
Less than 20 years ..	—	—	—	12	0·0%
20—25 years ..	8	7	15	99	15·2%
26—30 years ..	5	5	10	84	11·9%
31—35 years ..	6	3	9	39	23·1%
36 years and over ..	3	5	8	39	20·5%
Age unknown ..	—	2	2	15	—
TOTALS .. ..	22	22	44	288	—

Although we are dealing with relatively small figures, there is a suggestion that congenital maldevelopment accounts for a greater proportion of the deaths in the babies of mothers more than 30 years old, e.g., the mothers of the three mongol children who died were aged : 30, 37 and 41 years. A similar tendency is shown in Table 31 which compares the percentage distribution of all maternities in England and Wales by age of mother with a similar distribution of the babies who died from congenital malformation.

TABLE 31.

Age of Mother	No. of mothers whose children died of malformation	Percentage of total (42)	No. of all maternities in England and Wales	* Percentage distribution of all maternities in England and Wales
Less than 20 years ..	—	0%	30,753	3·9%
20 to 24 years ..	11	26·2%	211,392	27·1%
25 to 29 „ ..	13	31·0%	251,109	32·1%
30 to 34 „ ..	8	19·0%	157,258	20·1%
35 to 39 „ ..	7	16·7%	98,710	12·6%
40 to 44 „ ..	3	7·1%	30,146	3·9%
45 to 49 „ ..	—	0%	2,166	0·3%
Unknown ..	2	—	—	—
Total .. ..	44	—	—	—

\* The Registrar General’s Statistical Review 1948. Civil Tables. No. A.A.

Enquiries were made of the health of the mothers of children who died in infancy. The following was the information obtained from the mothers whose children died of malformation :—

TABLE 32.—*Ill Health of Mother.*

Ill-health of Mother	Deaths from Malformation	
	Males	Females
Prior to pregnancy .. .. .	3	1
Prior to and extending into pregnancy	—	—
During pregnancy .. .. .	3	3
After pregnancy .. .. .	1	—
Prior to, during and after pregnancy ..	1	3

The ten women who suffered ill-health during pregnancy were affected as follows :—

Urinary infection 1, Hydramnios 1, Phlebitis 1, Tuberculosis and Albuminuria 1, Injury from falls 1, Poor health generally 1, Excessive vomiting 1, Bronchitis 1, Hypertension and Œdema 1, Osteomyelitis and benign hypertension 1.

The following table shows the birth rank of the infants who died of malformation :—

Table 33.—*Total Legitimate Maternities.*

Infants who died	Number of Legitimate Maternities											Total
	1	2	3	4	5	6	7	8	9	16	Un-known	
Male deaths from Mal-formation ... ..	8	3	6	3	1	—	—	—	—	—	—	21
Female deaths from Malformation ...	5	4	3	2	1	1	2	—	1	1	2	22
TOTALS ... ..	13	7	9	5	2	1	2	—	1	1	2	43
Percentage of total infant deaths from malformation in Sheffield ... ..	31·7%	17·1%	22·0%	12·2%	4·9%	2·4%	4·9%	—	2·4%	2·4%	—	—
*Percentage of Legitimate maternities in England and Wales in each of these categories ... ..	41·4%	30·8%	14·1%	6·2%	3·0%	1·7%	1·0%	0·6%	0·4%	—	—	—
Previous maldeveloped children born to the same mother ... ..												Nil.

\* Figures calculated from Table JJ of the Registrar General’s Statistical Review, 1948. (Civil Tables).

The comparative figures suggest that, after the second pregnancy, there is an increasing likelihood of a child being born so malformed as to die of this condition. It is, of course, obvious that the age of the mother may be an important factor.

TABLE 34.—*Social Class.*

Social Class (Legitimate babies only)	Infant deaths from Congenital Malformation			Total births in Social Class in Sheffield	Mortality rate per 100 live births
	Males	Females	Total		
I	1	1	2	99	2·02
II	1	—	1	451	0·22
III	10	11	21	5,902	0·36
IV	6	2	8	1,627	0·49
V	3	8	11	540	2·04

The numbers on which this table is based are very small. There is, however, a suggestion that the infant mortality rate from malformation rises as the social class falls. This might be associated with the larger numbers of pregnancies which we know occur in women belonging to the lower social classes (See Table 3).



STILL BIRTHS.  
FEMALES.

TABLE 35.—Causes of Death and Social Class.

Marital Status, etc.	Social Class	CAUSE OF DEATH.																		TOTALS				
		Cause not known	Tox. of Preg.	Ante Part. Hæm.	Mother died	R. H. incomp.	Mother's failing Circ'l'n.	Difficult labour	Fœtus destroyed	Cranial injury	Obstruct. of cord	Malform.	B. B. A. in caul	Syphilis in mother	Degen. of placenta	Placental insuff.	Post-mature	Labour interfering with placental circn.	Incomplete placenta prævia and A. P. H.		Mother fell or had operat'n.	Rapid delivery	Ill nourished elderly multip.	Prem. and breech
Legitimate Parents cohabiting	I	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	II	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—
	III	10	14	1	—	1	—	8	—	1	11	—	—	—	—	—	—	1	1	2	1	—	—	—
	IV	5	1	2	—	1	—	1	—	2	1	—	—	—	—	—	—	—	—	3	—	—	—	—
	V	2	2	1	—	1	(shock)	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	1	—
Illegitimate Parents cohabiting Parents not cohabiting Incomplete information	Not known	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TOTALS	...	19	20	5	—	3	1	9	—	2	5	14	—	—	1	2	2	1	1	5	1	1	1	92

MALES.

Marital Status, etc.	Social Class	CAUSE OF DEATH.															TOTALS
		Cause not known	Tox. of Preg.	Ante Part. Hæm.	Mother died	R. H. incom.	Mother's failing Circ'l'n.	Difficult labour	Fœtus destroyed	Cranial injury	Obstruct. of cord	Malform.	B. B. A. in caul	Syphilis in mother	Degen. of placenta	Placenta prævia	
Legitimate { Parents cohabiting	I	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	4
	II	3	5	—	—	—	—	—	—	—	1	—	—	1	—	—	11
	III	20	8	7	1	3	—	12	3	—	7	3	—	—	2	—	66
	IV	12	1	1	—	—	1	3	—	1	2	2	1	—	—	—	24
	V	4	3	—	—	1	—	1	—	—	1	—	—	1	—	—	11
Illegitimate { Parents cohabiting Parents not cohabiting	Not known	1	—	1	—	—	—	2	—	—	—	—	—	—	—	—	4
	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1
	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
TOTALS	...	43	19	9	1	4	1	18	3	2	11	6	1	1	2	122	

### STILLBIRTHS.

A stillborn child is one that has issued forth from its mother after the 28th week of pregnancy and which did not, at any time after being completely expelled from its mother, breathe or show any other signs of life.

There were 226 such births in Sheffield during 1948 and it was possible to investigate 214 of them. The official stillbirth rate per 1,000 total (live and still) births was 24. The causes of death of stillborn babies were more difficult to determine than the causes of death of live born infants. It has been suggested, with some justification, that stillbirths and neonatal deaths should be considered together, as it is often a matter of some chance whether the child dies before, at, or shortly after birth. The same conditions may operate in all these cases, and the vitality of the child may be the only deciding factor.

Very often the same cause, e.g., toxæmia of pregnancy, may be the reason for the premature labour, and may also be the direct cause of the child's death. Moreover, in itself, the birth of a premature child exposes the child to the dangers always associated with premature births. In other words, the causes of stillbirths (and also neonatal deaths) are often not single clear cut issues, but may be related to the health of the mother, which, in its turn, may affect the child in a variety of ways.

In 60 of the 214 cases under review, the stillbirths can be attributed to various difficulties and accidents during the process of birth ; in 62, to illness of the mother ; and, in a further 62, no definite cause could be found.

As has been generally found in our investigation, the number of male was greater than the number of female stillbirths : 122 males to 92 females.

We have no information of the percentage of pregnancies which end in stillbirths in Sheffield, as the total number of pregnancies is not known. Table 36, however, sets down, side by side, the percentages of the total legitimate stillbirths and live births occurring in Social Classes in Sheffield during 1948. From these figures, so far as one can say, there is no significant difference among the social classes in the percentages of stillbirths as compared with percentages of total births.

**TABLE 36.**

Social Class	Total Legitimate Male and Female Stillbirths	Distribution of Legitimate Live Births (Calculated from Table 2)
I .. ..	4 (2%)	1.0%
II .. ..	15 (7.5%)	5.2%
III .. ..	120 (60%)	68.5%
IV .. ..	40 (20%)	18.9%
V .. ..	21 (10.5%)	6.3%
Total ..	200	—
Not known	14 in addition to above	—



TABLE 37.—*Position in Family of Stillborn Child (Males, and Females, combined).*

Position in family	Distribution of stillbirths according to birth rank (legitimate and illegitimate)	Legitimate Stillbirths distributed by Social Classes							*Percentage of total	Percentage of legitimate maternities in England and Wales in each of these categories	Illegitimate
		I	II	III	IV	V	Unknown	Total			
1st child	82	3	8	50	14	4	1	80	39.4%	41.4%	2
2nd „	52	1	4	32	10	2	1	50	24.6%	30.8%	2
3rd „	29	—	1	13	3	7	1	25	12.3%	14.1%	4
4th „	22	—	2	10	8	2	—	22	10.8%	6.2%	—
5th „	10	—	—	7	1	2	—	10	4.9%	3.0%	—
6th „	4	—	—	3	1	—	—	4	2.0%	1.7%	—
7th „	2	—	—	1	—	1	—	2	1.0%	1.0%	—
8th „	4	—	—	1	3	—	—	4	2.0%	0.6%	—
9th „	4	—	—	2	—	2	—	4	2.0%	0.4%	—
10th „	—	—	—	—	—	—	—	—	0.0%	} Figures not given separately	—
11th „	1	—	—	—	—	1	—	1	0.5%		—
15th „	1	—	—	1	—	—	—	1	0.5%		—
?	3	—	—	—	—	—	3	3	—		—
TOTALS	214	4	15	120	40	21	6	206	100.0%	—	8
No. of live births in Social Classes ... ..		99	451	5902	1627	540					
Above totals expressed per 1,000 live births in each Social Class ... ..		40.4	33.3	20.3	24.6	38.9					

\* As we have no information as to the birth rank of 3 legitimate babies, the percentage has been calculated on 203 cases.

This table compares the birth order of legitimate stillborn children with the distribution of legitimate maternities by birth order in England and Wales as shown in the Registrar General's Statistical Review (Civil Tables) for 1948. There is a suggestion that, after the third pregnancy, there is an increasing chance of a stillbirth.

We have also tried to find out if there is any association between stillbirth and the social status of the parent. Our figures show a greater incidence of stillbirths at the extreme ends of the social scale, and the lowest incidence in Class III—skilled artisans.

As the figures with which we have worked are very small, it would be unwise to draw final conclusions. Nevertheless, this interesting finding seems to warrant further investigation over a wider field.

TABLE 38.—*Age Distribution of Mothers of legitimate and illegitimate Stillborn Babies.*

Age of mother	No. of Mothers in Group	Percentage of total	*Percentage distribution of all maternities in England and Wales according to age of mother
Less than 20 years ..	3	1.4%	3.9%
20 to 24 years ..	38	18.0%	27.1%
25 to 29 „ ..	66	31.3%	32.1%
30 to 34 „ ..	59	28.0%	20.1%
35 to 39 „ ..	23	10.9%	12.6%
40 to 44 „ ..	19	9.0%	3.9%
45 to 49 „ ..	3	1.4%	0.3%
Total .. ..	211	—	—
Age not known ..	3	—	—

\* Calculated from Registrar General's Statistical Review, 1948—Civil Tables AA.

The figures suggest that there may be an increased likelihood of stillbirths occurring when the mother is over 30 years old.

TABLE 39.—*Incidence of Stillbirths. Previous Stillbirths and miscarriages of mothers who gave birth to stillborn babies in 1948.*

Total pregnancies	No. of Cases	No. of stillbirths or miscarriages previously								Total pregnancies	Total stillbirths or miscarriages	Percentage of pregnancies ending in miscarriages or stillbirths
		0	1	2	3	4	5	6	7			
1	83	83								83	—	—
2	52	39	13							104	13	12.5%
3	29	17	8	4						87	16	18.4%
4	22	10	9	2	1					88	16	18.4%
5	10	8	2	—	—	—				50	2	4.0%
6	4	1	—	—	3	—	—			24	9	37.5%
7	2	1	1	—	—	—	—	—		14	1	7.1%
8	4	2	1	—	—	—	—	—	1	32	8	25.0%
9	4	2	1	1	—	—	—	—	—	36	3	8.3%
10	—	—	—	—	—	—	—	—	—	—	—	—
11	1	1	—	—	—	—	—	—	—	11	—	—
15	1	—	—	1	—	—	—	—	—	15	2	13.3%
Not known	2	—	—	—	—	—	—	—	—	—	—	—
TOTAL ...	214											

TABLE 40.—*Incidence of Stillbirths. Previous Stillbirths and miscarriages of mothers who gave birth to living babies which died in infancy from all causes in 1948.*

Total pregnancies	No. of Cases	No. of stillbirths or miscarriages previously								Total pregnancies	Total stillbirths or miscarriages	Percentage of pregnancies ending in miscarriages or stillbirths
		0	1	2	3	4	5	6	7			
1	93	93								93	—	—
2	79	70	9							158	9	5.7%
3	47	32	15	—						141	15	10.6%
4	26	17	6	3	—					104	12	11.5%
5	10	6	3	—	1	—				50	6	12.0%
6	3	2	—	—	1	—	—			18	3	16.6%
7	5	3	1	1	—	—	—	—		35	3	8.6%
8	3	3	—	—	—	—	—	—	—	24	—	—
9	2	2	—	—	—	—	—	—	—	18	—	—
10	2	—	1	—	1	—	—	—	—	20	4	20.0%
11	1	1	—	—	—	—	—	—	—	11	—	—
16	1	—	1	—	—	—	—	—	—	16	1	6.3%
?	16	—	—	—	—	—	—	—	—	—	—	—
TOTAL ...	288											

When one compares the right hand columns of Tables 39 and 40 it is noted that, in most cases, the figure in Table 39 is higher than the corresponding figure in Table 40, suggesting that the group of mothers who gave birth to stillborn children in 1948 had been more prone in the past to have stillborn children than the group of mothers whose children, although born alive, died in 1948.



### SUMMARY AND CONCLUSIONS.

An investigation was made into the causes of, and factors contributing to, the infant deaths occurring in Sheffield in 1948. The registered legitimate births were divided according to social classes, and 99, 451, 5,902, 1,627 and 540 births were assigned to classes : I, II, III, IV and V, respectively.

Of a total of 8,628 legitimate births to Sheffield women, 4,426 were males and 4,202 were females. 224 more males than females were born, but the loss of infant life amongst males was markedly greater than amongst females. This phenomenon was occurring even before birth, as there were 122 stillborn males and only 92 stillborn females. During the first year of life, 64 more males than females died (176 male deaths and 112 female deaths). This remarkable difference in infant mortality occurred particularly in deaths from : prematurity (41 males and 26 females), cranial injury (20 males and 6 females) and enteritis (33 males and 8 females). There was no similar preponderance of female deaths over male deaths from any other cause.

The most serious causes of loss of infant life were : prematurity (67 deaths), respiratory infection including measles and whooping cough (62 deaths), malformation (44 deaths), bowel infection (41 deaths), and accidents and injuries associated with birth (37 deaths).

Social classes IV and V seemed to suffer a high infant mortality. This applied also to social class I, but, in this class, the figures were too small to be statistically reliable. The position with regard to still births was somewhat similar. Deaths from prematurity, malformation, birth injury and respiratory and bowel infection were unduly prevalent amongst the lower social classes.

As regards prematurity, the chance of survival of a premature born male was far less than that of a female of similar weight. In the case of both sexes, the smaller the baby the less its chance of survival. Apart from immaturity, malformation and intracranial injury were serious causes of loss of life among premature infants. 48 per cent. of the deaths of premature babies occurred in the first 24 hours after birth. Maternal illness was shown to be a serious cause of loss of infant life because premature birth is frequently associated with it.

A baby who is an only child seems less likely to die of measles, whooping cough, pneumonia and septic conditions than does a child who has older brothers and sisters. There is an indication that infant deaths from infective conditions are less common in the families of the professional and managerial classes, and most common in the babies of the labourers and unemployed persons. The larger families found in the group comprising Classes IV and V may have some bearing on this.

In the case of the 41 deaths from gastro-enteritis, it was stated that only 5 babies were having no other milk than breast milk. There is also the suggestion of an increased risk of death from enteritis to an infant in a home that is not clean.

Maldevelopment as a cause of death seemed more likely in : (1), the babies of mothers over 30 years old and, (2), those who had had several previous pregnancies. We cannot assess the relative importance of these two factors, with the numbers at our disposal, but a similar tendency was noticed in the case of stillbirths.

Cranial injury, malformation and rhesus incompatibility caused both stillbirths and infant deaths. Toxæmia of pregnancy and antepartum hæmorrhage were a cause of stillbirth and infant death through prematurity. Some women are prone to have a succession of stillborn children.

The investigation suffers from the disadvantage of being concerned with relatively small numbers of cases, and its value would have been enhanced if a post-mortem had been performed upon every infant who died before or after birth. In the light of some post-mortem findings, we felt that certain registered causes of death were inaccurate, and we made the necessary alterations in the diagnosis for the purpose of this investigation.

We cannot claim to have made any outstanding contribution towards reducing the infant death rate, but we now know that much more fundamental research is necessary before this problem is solved. We have also made some mistakes which we hope will not be repeated when we extend this investigation in the future.

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